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(FILE 'HOME' ENTERED AT 12:45:37 ON 23 JUN 2007)

FILE 'REGISTRY' ENTERED AT 12:45:46 ON 23 JUN 2007

L1 STRUCTURE UPLOADED

L2 8 S L1

L3 508 S L1 FULL

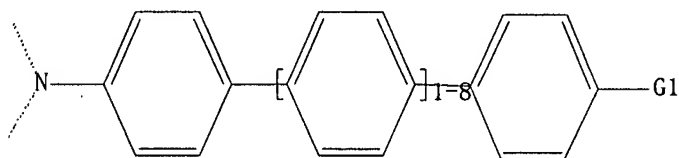
FILE 'CAPLUS' ENTERED AT 12:47:00 ON 23 JUN 2007

L4 339 S L3

L5 201 S L4 AND PY<2004

=> d que 15 stat

L1 STR



G1 H, Cl, Hy, X

Structure attributes must be viewed using STN Express query preparation.

L3 508 SEA FILE=REGISTRY SSS FUL L1

L4 339 SEA FILE=CAPLUS ABB=ON PLU=ON L3

L5 201 SEA FILE=CAPLUS ABB=ON PLU=ON L4 AND PY<2004

=> d 1-201 bib abs hitstr

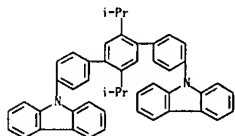
L5 ANSWER 1 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2003:985804 CAPLUS  
 DN 140:50038  
 TI Organic electroluminescent element and its manufacturing method  
 IN Suzuri, Yoshiyuki; Saito, Atsushi; Kita, Hiroshi; Yamada, Taketoshi  
 PA Konica Corporation, Japan  
 SO Eur. Pat. Appl., 50 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 EP 1371709	A1	20031217	EP 2003-11196	20030528 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004014172	A	20040115	JP 2002-162753	20020604
US 2004005404	A1	20040108	US 2003-449321	20030529
US 6960364	R2	20051101		
US 2005266153	A1	20051201	US 2005-194881	20050801
PRA1 JP 2002-162753	A	20020604		
US 2003-449321	A1	20030529		

AB Methods of manufacturing organic electroluminescent devices comprising a substrate supporting a light-emitting layer and 21 of a hole-injecting layer, a hole-transport layer, an electron-injecting layer, and an electron-transport layer in which the light-emitting layer is adjacent to 21 other layer are described which entail providing a first coating solution employing a first organic solvent for one layer of the two adjacent layers and a second coating solution employing a second solvent for the other layer, the first solvent being immiscible with the second solvent; simultaneously coating the first and second coating solns. on the substrate so that the first coating solution is in contact with the second coating solution; and drying the coatings. One solvent may be water while the other is an organic solvent. Alternately, a layer of a solvent which is immiscible with the solvents used for either the first or second layer coatings may be provided between the applied coating layers. The devices, including white and blue light-emitting devices, and illumination sources and displays using them, are also described.

IT 634907-40-7  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
 (organic electroluminescent device production using wet coating methods with immiscible solvents for different layers and the devices)

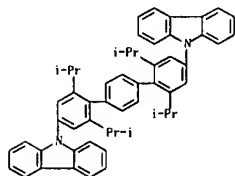
RN 634907-40-7 CAPLUS  
 CN 9H-Carbazole, 9,9'-(2,2',5,5'-bis(1-methylethyl)[1,1':4',1''-terphenyl]-4,4'-diyl)bis- (9CI) (CA INDEX NAME)



RE, CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD

L5 ANSWER 2 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2003:874573 CAPLUS  
 DN 139:371625  
 TI Organic electroluminescent device and its production method  
 IN Suzurizato, Yoshiyuki; Yamada, Taketoshi; Kita, Hiroshi  
 PA Konica Minolta Holdings Inc., Japan  
 SO Jpn. Kokai Tokkyo Koho, 32 pp.  
 CODEN: JXXXXF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 JP 2003317946	A	20031107	JP 2002-120841	20020423 <--
PRA1 JP 2002-120841		20020423		
AB				
The invention relates to an organic electroluminescent device comprising organic layers sandwiched between an anode and a cathode, wherein, at least, one of the organic layers is formed by a wet process, such as ink-jet printing, spin coating, etc., using the solution containing the organic compound having the glass transition temperature in 80-250 °C and purified by a sublimation method. One of the organic layers prepared by the wet process may be an electroluminescent layer that comprises a host material and a phosphorescent guest material.				
IT				
620626-18-8P RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses) (host in light-emitting layer; organic electroluminescent device)				
RN				
620626-18-8 CAPLUS				
CN				
9H-Carbazole, 9,9'-(2,2',5,5'-bis(1-methylethyl)[1,1':4',1''-terphenyl]-4,4'-diyl)bis- (9CI) (CA INDEX NAME)				



L5 ANSWER 1 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2003:837017 CAPLUS  
 DN 139:330127  
 TI Novel aromatic compound for organic electroluminescent device  
 IN Ikeda, Hidetsugu; Matsura, Masahide; Funahashi, Masakazu; Hosokawa, Chishio  
 PA Idemitsu Kosan Co., Ltd., Japan  
 SO PCT Int. Appl., 69 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 WO 2003087023	A1	20031023	WO 2003-JP4905	20030417 <--
R: CN, IN, KR, US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
JP 2003306454	A	20031028	JP 2002-114400	20020417 <--
EP 1496041	A1	20050112	EP 2003-723137	20030417
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
CN 1646456	A	20050727	CN 2003-808545	20030417
CN 1876610	A	20061213	CN 2006-10092401	20030417
CN 1939884	A	20070404	CN 2006-10159844	20030417
US 2005214565	A1	20050929	US 2005-508602	20050316
PRA1 JP 2002-114400	A	20020417		
CN 2003-808545	A3	20030417		
WO 2003-JP4905	W	20030417		
OS				
MARPAT 139:330127				
GI				

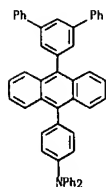
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The invention refers to a novel aromatic compound comprising an anthracene skeleton and an asym. mol. structure A-Ar-B [Ar = (un)substituted anthracenediyl; R = alkyl- or arylamine-mono-substituted C2-60 heterocycle or (un)substituted C5-60 aryl; A = I, II, III, IV, V, VI, VII, VIII, IX, X, IX: Ar1-3 = (un)substituted C6-30 aryl; Ar4 = (un)substituted C5-30 arylene; Ar5 = (un)substituted C6-30 trivalent aromatic; R1, 2 = H, halo, hydroxyl, (un)substituted amino, nitro cyano (un)substituted C1-30 alkyl, C2-40 alkenyl, C5-40 cycloalkyl, C1-30 alkoxy, C5-40 aromatic hydrocarbon, C2-40 aromatic heterocycle, C7-40 aralkyl, C6-40 aryloxy, C2-30 silyl or carboxyl; Ar1, 2 and R1, 2 may each join together to form rings].

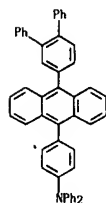
IT 614735-09-0P  
 RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (novel aromatic compound for organic electroluminescent device)

RN 614735-09-0 CAPLUS  
 CN Benzenamine, N,N-diphenyl-4-[(10-[(1,1':3',1''-terphenyl)-5'-yl]-9-anthracenyl)]- (9CI) (CA INDEX NAME)

L5 ANSWER 3 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



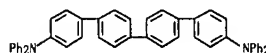
IT 614735-07-8P  
 RL: SPN (Synthetic preparation): PREP (Preparation)  
 (novel aromatic compound for organic electroluminescent device)  
 RN 614735-07-8 CAPLUS  
 CN Benzenamine, N,N-diphenyl-4-[(10-[(1,1':2',1'':terphenyl)-4'-yl-9-anthracenyl]- (9CI) (CA INDEX NAME)



RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:817148 CAPLUS  
 DN 140:17590  
 TI Relationship between molecular skeleton and stimulated-emission threshold in dilute thin films of linear-chain-structured fluorescent dyes  
 AU Sakai, Ken-ichi; Tazuki, Takao; Motoyoshiya, Jiro; Inoue, Masamitsu; Itoh, Yoshihiro; Ichikawa, Masubu; Fujimoto, Tetsuya; Yamamoto, Iwao; Koyama, Toshiaki; Taniguchi, Yoshio  
 CS Faculty of Textile Science and Technology, Shinshu University, Nagano, 386-8507, Japan  
 SO Chemistry Letters (2003), 32(10), 968-969  
 CODEN: CMLTAG; ISSN: 0366-7022  
 PB Chemical Society of Japan  
 DT Journal  
 LA English  
 AB We carried out photopumping measurements for the dilute thin films of linear-chain-structured laser dyes where  $\pi$ -units such as benzene, ethylene, and oxazole, are linearly linked via  $\pi$ -bonds. Among them, 4,4'-bis[4-(di-p-tolylamino)styryl]biphenyl recorded the lowest stimulated-emission threshold of 2  $\mu\text{J}/\text{cm}^2$ . It was revealed that the threshold was related to whether the number of constituent  $\pi$ -units was even or odd.  
 IT 145898-89-1  
 RL: PRP (Properties): TEM (Technical or engineered material use): USES (Uses)  
 (relationship between mol. skeleton and stimulated-emission threshold in dilute thin films of linear-chain-structured fluorescent dyes)  
 RN 145898-89-1 CAPLUS  
 CN [1,1':4',1'':4'',1''':Quaterphenyl]-4,4'''-diamine, N4,N4,N4'',N4'''-tetraphenyl- (CA INDEX NAME)

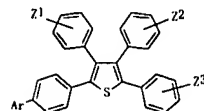


RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

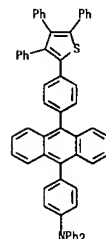
AN 2003:773841 CAPLUS  
 DN 139:298983  
 TI Organic electroluminescent device and novel thiophene derivative  
 IN Ishida, Tsutomu; Shimamura, Takehiko; Tanabe, Yoshimitsu; Totani, Yoshiyuki; Nakatsuka, Masakatsu  
 PA Mitsui Chemicals Inc., Japan  
 SO Jpn. Kokai Tokkyo Koho, 48 pp.  
 CODEN: JXAXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1  

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003282268	A	20031003	JP 2002-112966	20020416 <-
JP 3853246	B2	20061206		
PRA1 JP 2002-9104	A	20020117		
OS WARPAT 139:298983				
GI				



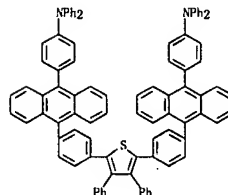
AB The invention refers to an organic electroluminescent device comprising a novel thiophene derivative 1 [Ar = (un)substituted aryl; Z1-Z3 = H, halo, straight chain, branched or cyclic alkyl, alkoxy, (un)substituted amino, aryl or aralkyl] in at least one layer.

IT 608142-38-7P 608142-47-8P  
 RL: DEV (Device component use): SPN (Synthetic preparation): PREP (Preparation): USES (Uses)  
 (organic electroluminescent device and novel thiophene derivative)  
 RN 608142-38-7 CAPLUS  
 CN Benzenamine, N,N-diphenyl-4-[(10-[(4-(3,4,5-triphenyl-2-thienyl)phenyl)-9-anthracenyl]- (9CI) (CA INDEX NAME)



L5 ANSWER 5 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

AN 608142-47-8 CAPLUS  
 CN Benzenamine, 4,4'-[(3,4-diphenyl-2,5-thiophenediyl)bis(4,1-phenylene-10,9-anthracenediyl)]bis[N,N-diphenyl- (9CI) (CA INDEX NAME)



L5 ANSWER 6 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2003:759350 CAPLUS  
 DN 140:171902  
 TI Energy-transfer-type polymeric light-emitting material  
 IN Wang, Lixiang; Min, Changchun; Tu, Guoli  
 PA Changchun Institute of Applied Chemistry, Chinese Academy of Sciences,  
 Peop. Rep. China  
 SO Faming Zhuanli; Shenqing Gongkai Shuomingshu, 13 pp.  
 COOEN: CNXXEV  
 DT Patent  
 LA Chinese  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI CN 1381543	A	20021127	CN 2002-116046	20020428 <--
PRAI CN 2002-116046		20020428		

AB Title luminescent polymers are synthesized by N-alkylation of 9-alkyl-4-amino-1,8-naphthalimide with dibromoarene in 1,3-dimethyl-3,4,5,6-tetrahydro-2-pyrimidinone solvent in the presence of K<sub>2</sub>CO<sub>3</sub>, CuI, and 18-crown-6 at 140-220° for 24-48 h under bubbling N<sub>2</sub>; and then Suzuki reaction with dibromo- aromatic monomer (such as 9,9-dioctyl-2,7-dibromofluorene, 1,4-dibromobenzene, 2,5-dihexyloxy-1,4-dibromobenzene, 9,10-dibromoanthracene, 9-hexyl-2,7-dibromocarbazole, or 4,4'-dibromobiphenyl) and arylene diboronate (such as 2,5-dihexyloxy-1,4-benzenediboronic acid or 1,4-benzenediboronic acid bis(trimethylene) ester) in THF in the presence of K<sub>2</sub>CO<sub>3</sub> and tetra(triphenylphosphinato)Pd under refluxing for 3-5 d. The conjugated length and forbidden band of the light-emitting material may be regulated by controlling the content of naphthalimide derivative unit.

IT 654676-41-2P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (preparation of energy-transfer-type light-emitting polymers)

RN 654676-41-2 CAPLUS  
 CN Poly[(2-decyl-2,3-dihydro-1,3-dioxo-1H-benz[de]isoquinolin-6-yl)imino][1,1':4',1'':4'',1''':4''',1''''-quinquephenyl]-4,4''''-diyl] (9C1) (CA INDEX NAME)

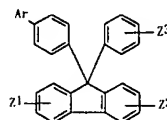
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

L5 ANSWER 7 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2003:723685 CAPLUS  
 DN 139:252299  
 TI Diphenylfluorene derivatives and organic electroluminescence devices using them with high luminescence efficiency  
 IN Ishida, Tsutomu; Shimamura, Takehiko; Tanabe, Yoshimitsu; Totani, Yoshiyuki; Nakatake, Masakatsu  
 PA Mitsui Chemicals Inc., Japan  
 SO Jpn. Kokai Tokkyo Koho, 40 pp.  
 COOEN: JKAAP  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003261472	A	20030916	JP 2002-62101	20020307 <--
PRAI JP 2002-62101		20020307		

OS MARPAT 139:252299  
 GI

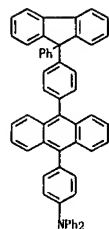


AB The electroluminescence devices contain the diphenylfluorene derivs. 1 (Ar = anthryl; Z1-3 = H, halo, alkyl, alkoxy, aryl, aralkyl) between a pair of electrodes. The electroluminescence devices may further contain luminescent organic metal complexes and triarylamine.

IT 597554-08-0P 597554-12-6P 597554-19-3P  
 597554-23-9P  
 RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
 (anthrylphenylphenylfluorene derivs. for organic EL devices with high luminescence efficiency)

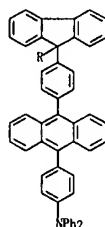
RN 597554-08-0 CAPLUS  
 CN Benzenamine, N,N-diphenyl-4-[10-{4-(9-phenyl-9H-fluoren-9-yl)phenyl}-9-anthracenyl]- (9C1) (CA INDEX NAME)

L5 ANSWER 7 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 597554-12-6 CAPLUS  
 CN Benzenamine, 4-[10-{4-(9-{1,1'-biphenyl}-4-yl-9H-fluoren-9-yl)phenyl}-9-anthracenyl]-N,N-diphenyl- (9C1) (CA INDEX NAME)

PAGE 1-A



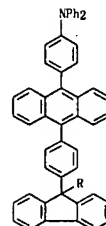
PAGE 2-A



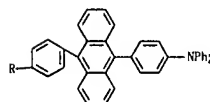
RN 597554-19-3 CAPLUS  
 CN Benzenamine, 4,4'-(9H-fluoren-9-ylidenebis(4,1-phenylene-10,9-anthracenediyl))bis[N,N-diphenyl]- (9C1) (CA INDEX NAME)

L5 ANSWER 7 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

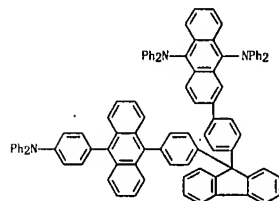
PAGE 1-A



PAGE 2-A



RN 597554-23-9 CAPLUS  
 CN 9,10-Anthracenediimine, 2-[4-[9-[4-[10-{4-(diphenylamino)phenyl}-9-anthracenyl]phenyl]-9H-fluoren-9-yl]phenyl]-N,N,N',N'-tetraphenyl- (9C1) (CA INDEX NAME)





L5 ANSWER 8 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:673851 CAPLUS

DN 139:204846

TI Anthracene compounds, their organic EL device materials, and their EL devices having high emission efficiency, long service life, and good heat resistance

IN Hosokawa, Chishio; Funabashi, Masakazu; Ikeda, Shuji; Yamamoto, Hiroshi

PA Idemitsu Kosen Co., Ltd., Japan

SD Jpn. Kokai Tokkyo Koho, 23 pp.

CODEN: JXKXAF

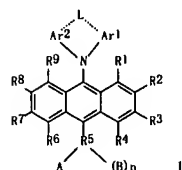
DT Patent

LA Japanese

FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003238534	A	20030827	JP 2002-45705	20020222 <--
JP 2002-45705		20020222		
OS MARPAT 139:204846				

GI



AB The anthracene compds. are represented by a general formula of I [R1-R4, R6-R9 = H, halo, OH, NO<sub>2</sub>, CN, amino, C1-30 alkyl, C4-40 alkenyl, CO<sub>2</sub>H, etc.; R5 = divalent or trivalent C5-40 aromatic, divalent or trivalent C2-40 aromatic heterocyclic; R1-R9 may be bonded to neighboring group and form ring; A, B = C6-40 aryl, aromatic C2-40 heterocyclic; when R5 = C10-40 aromatic or aromatic C5-40 heterocyclic, A may be H, Ar1, Ar2 = C6-40 aryl, aromatic C2-40 heterocyclic, may be bonded to each other via linkage group L; L = (CR10R11)<sub>m</sub>, (SiR10R11)<sub>m</sub>, NR12m, vinylene, C6-40 arylene; R10-R12 = H, halo, C1-40 alkyl, C5-40 cycloalkyl, C5-40 aromatic hydrocarbyl, aromatic C2-40 heterocyclic, C7-40 aralkyl; m = 1, 2, 3; n = 0, 1]. The organic EL device contains, between anodes and cathodes,  $\geq 1$  organic thin-film layers involving a luminescent layer and containing I in  $\geq 1$  of the layers. Preferably, the organic thin-film layers consist of a luminescent layer, an electron-transporting layer, and a hole-transporting layer and at least the luminescent layer contains I. Preferably, the luminescent layer further contains arylamine compds. which may be selected from those represented by a general formula of Ar5(NAr6Ar7)<sub>p</sub> (Ar5 = C6-40 aromatic; Ar6, Ar7 = H, C6-40 aromatic; p = 1-6 integer) or Ar8(NAr9)qAr10rAr11Ar12s(NAr13) (Ar14 (Ar8, Ar14 = C6-40 aromatic; Ar9-Ar13 = H, C6-40 aromatic; q, r, s = 1, 1). The electron-transporting layer may contain inorg. compds., preferably selected from dielects., semiconductors, or fine-crystalline or amorphous dielec. thin films. The dielects. may comprise  $\geq 1$  compds. selected from alkali metal chalcogenides, alkaline earth metal chalcogenides, alkali metal halides, and alkaline earth metal halides. The semiconductors

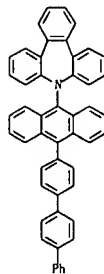
L5 ANSWER 8 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

may comprise  $\geq 1$  oxides, nitrides, or oxynitrides of  $\geq 1$  elements selected from Ba, Ca, Sr, Yb, Al, Ga, In, Li, Na, Cd, Mg, Si, Ta, Sb, and Zn. The electron-transporting layer may contain reducing dopants, preferably,  $\geq 1$  alkali metals selected from Na, K, Rb, and Cs and/or  $\geq 1$  alk. earth metals selected from Ca, Sr, and/or Ba. In another alternative, the org. thin-film layers consist of an electron-transporting layer, and a hole-transporting layer and at least one of these layers contain I.

IT 585533-58-OP 585533-64-8P  
 RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
 (anthracene compds. for organic EL device having high emission efficiency, long service life, and good heat resistance)

RN 585533-58-0 CAPLUS

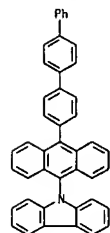
CN 9H-Tribenz[b,d,f]azepine, 9-(10-[(1,1':4',1''-terphenyl)-4-yl-9-anthracenyl])- (9C1) (CA INDEX NAME)



RN 585533-64-8 CAPLUS

CN 9H-Tribenz[b,d,f]azepine, 9-(10-[(1,1':4',1''-terphenyl)-4-yl-9-anthracenyl])- (9C1) (CA INDEX NAME)

L5 ANSWER 8 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



L5 ANSWER 9 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:628443 CAPLUS

DN 139:171119

TI Organic electroluminescent device comprising coupled anthracene fluorene derivative and with amino-substituted hydrocarbon

IN Totani, Yoshiyuki; Ishida, Tsutomu; Shimamura, Takehiko; Tanabe, Yoshimitsu; Nakatsuka, Masakatsu

PA Mitsui Chemicals Inc., Japan

SD Jpn. Kokai Tokkyo Koho, 122 pp.

CODEN: JXKXAF

DT Patent

LA Japanese

FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003229273	A	20030815	JP 2002-25736	20020201 <--
JP 2002-25736		20020201		
OS MARPAT 139:171119				

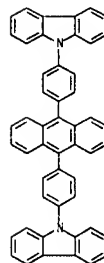
AB The invention refers to an organic electroluminescent device comprising one or two fluorene rings directed bonded to an anthracene and a amino-substituted hydrocarbon.

IT 194296-19-0

RL: DEV (Device component use); USES (Uses)  
 (organic electroluminescent device comprising coupled anthracene fluorene derivative and with amino-substituted hydrocarbon)

RN 194296-19-0 CAPLUS

CN 9H-Carbazole, 9,9'-(9,10-anthracenediyl-di-4,1-phenylene)bis- (9C1) (CA INDEX NAME)



L5 ANSWER 10 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:604488 CAPLUS

DN 139:355524

TI Single-Molecule Spectroscopy of Intramolecular Electron Transfer in Donor-Bridge-Acceptor Systems

AU Liu, Ruchuan; Holman, Michael W.; Zang, Ling; Adnans, David M.

CS Department of Chemistry, Columbia University, New York, NY, 10027, USA

SO Journal of Physical Chemistry A (2003), 107(34), 6522-6526

CODEN: JPCAPH; ISSN: 1089-5639

PB American Chemical Society

DT Journal

LA English

AB It is widely appreciated that single-mol. spectroscopy (SMS) can be used to measure properties of individual mols. which would normally be obscured in an ensemble-averaged measurement. SMS can be used to study intramol. electron transfer (IET) processes in model dimer systems composed of two perylene chromophores connected via an adjustable bridge. The fluorescence behaviors of a large number of mols. are cataloged and the results statistically analyzed to gauge information about the range of behaviors of the ensemble. Single-mol. fluorescence time trajectories reveal blinks, momentary losses in fluorescence (>20 ms to seconds in duration), which are attributed to discrete IET excursions to the charge-separated (CS) state. Fluorescence blinking behavior is dependent on bridge length and chromophore geometry, which affect the electronic coupling and therefore the IET. The statistical trends observed in this anal. were used to corroborate the assignment of the blinking behavior to IET. These results and methodol. have implications for mol. electronics, where understanding and controlling the range of possible behaviors inherent to mol. systems will likely be as important as understanding the individual behavior of any given mol.

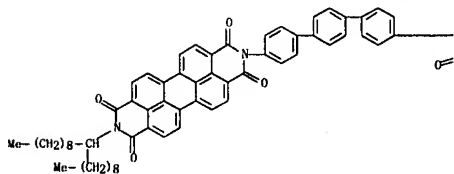
IT 619320-47-7P

RL: PRP (Properties): SPN (Synthetic preparation): PREP (Preparation) (single-mol. spectroscopy of intramol. electron transfer in donor-bridge-acceptor systems)

RN 619320-47-7 CAPLUS

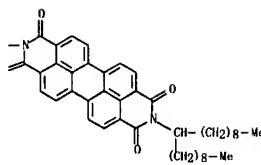
CN Anthra[2,1,9-def:6,5,10-d'e'f']diisoquinoline-1,3,8,10(2H,9H)-tetrone, 2,2'-[1,1':4',1''-terphenyl]-4,4''-diylbis[9-(1-nonyldecyl)- (9C1) (CA INDEX NAME)

PAGE 1-A



L5 ANSWER 10 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-B



RE.CNT 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 11 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:567947 CAPLUS

DN 139:276986

TI Binuclear and Starburst Organoplatinum(II) Complexes of 2,2'-Dipyridylamino Derivative Ligands: Structures, Fluxionality, and Luminescence

AU Liu, Qin-De; Jia, Wen-Li; Wu, Gang; Wang, Suning

CS Department of Chemistry, Queen's University, Kingston, ON, K7L 3N6, Can.

SO Organometallics (2003), 22(18), 3781-3791

CODEN: ORND7; ISSN: 0276-7335

PB American Chemical Society

DT Journal

LA English

OS CASREACT 139:276986

AB New binuclear and starburst trinuclear organoplatinum complexes based on 2,2'-dipyridylamino (dpa) derivative ligands. Pt2Ph4(bab), bab = 1,4-bis(2,2'-dipyridylamino)benzene, 1, Pt2Ph4(babp), babp = 4,4'-bis(2,2'-dipyridylamino)biphenyl, 2, Pt3Ph6(tab), tab = 1,3,5-tris(2,2'-dipyridylamino)benzene, 3, Pt3Ph6(tat), tat = 2,4,6-tris(2,2'-dipyridylamino)-1,3,5-triazine, 4, Pt3Ph6(tabp), tabp = 1,3,5-tris(p-(2,2'-dipyridylamino)phenyl)benzene, 5, Pt3Ph6(tapt), tapt = 2,4,6-tris(p-(2,2'-dipyridylamino)phenyl)-1,3,5-triazine, 6, Pt3Ph6(tabpb), tabpb = 1,3,5-tris(4'-(2,2'-dipyridylamino)biphenyl)benzene, 7, and Pt3Ph6(tabpt), tabpt = 1,3,5-tris(4'-(2,2'-dipyridylamino)biphenyl)benzene, 8, were synthesized by the reaction of [PtPh2(SMe2)]n with the corresponding chelate ligand. The structures of complexes 1-5 and 8 were determined by single-crystal x-ray diffraction. All eight complexes have phosphorescent emissions in the blue/green region at 77 K, attributed to ligand-centered  $\pi \rightarrow \pi^*$  transitions. Ligand-based fluorescent emission was also detected for complexes 5, 6, and 8. Complexes 1-8 display versatile structures in the solid state. Complex 4 was fluxional in solution. The key factors that influence the structures of the complexes in solution and the solid state are the degree of conjugation of the amino nitrogen lone pair electrons of the dpa unit with the central aromatic linker and intramol. nonbonding interactions.

IT 606142-70-5P

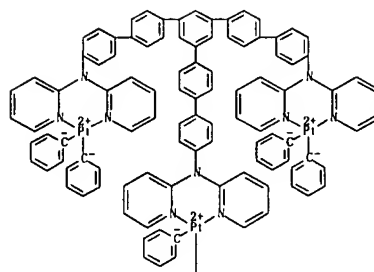
RL: PRP (Properties): SPN (Synthetic preparation): PREP (Preparation) (mol. structure: preparation, structures, fluxionality, and luminescence of binuclear and starburst trinuclear dipyridylamino chelate complexes of dipyridylamino derivative)

RN 606142-70-5 CAPLUS

CN Platinum, [Pt3-[N,N'-[5'-(4'-(2-pyridinyl)-N)amino][1,1'-biphenyl]-4-yl][1,1':4',1''-3',1'''-4'',1''''-quinquephenyl]-4,4''''-diyl]bis[N-(2-pyridinyl)-N-(2-pyridinylamino-N)]hexaphenyltri- (9C1) (CA INDEX NAME)

L5 ANSWER 11 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A



PAGE 2-A



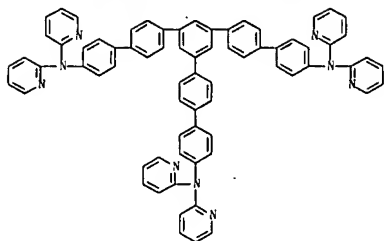
IT 606142-77-2P

RL: PRP (Properties): RCT (Reactant): SPN (Synthetic preparation): PREP (Preparation): RACT (Reactant or reagent) (preparation, structures, fluxionality, and luminescence of binuclear and starburst trinuclear dipyridylamino chelate complexes of dipyridylamino derivative)

RN 606142-77-2 CAPLUS

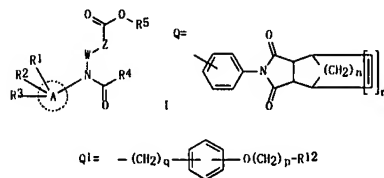
CN [1,1':4',1''-3',1'''-4'',1''''-quinquephenyl]-4,4''''-diamine, 5'-[4'-(2-pyridinylamino)[1,1'-biphenyl]-4-yl]-N,N,N',N'-tetra-2-pyridinyl- (9C1) (CA INDEX NAME)

L5 ANSWER 11 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMATL5 ANSWER 12 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2003:532636 CAPLUS

DN 139:85362  
 T1 Preparation of 3-phenylpropanamide derivatives as antagonists of vascular endothelial growth factor (VEGF) receptor  
 IN Saito, Shuji; Suga, Yoichiro; Sato, Masakazu; Shibuya, Masabumi  
 PA Taiho Pharmaceutical Co., Ltd., Japan  
 SO PCT Int. Appl., 43 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003055847	A1	20030710	WO 2002-JP13692	20021226 <--
V: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, OM, PH, PL, PT, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UC, US, UZ, VC, VN, VO, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2482392	A1	20030710	CA 2002-2482392	20021226 <--
AU 2002359922	A1	20030715	AU 2002-359922	20021226 <--
EP 1466891	A1	20041013	EP 2002-793420	20021226
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
CN 1610659	A	20050427	CN 2002-826383	20021226
NO 2004002664	A	20040927	NO 2004-2664	20040624
US 2005222423	A1	20051006	US 2005-500135	20050310
PRA1 JP 2001-396525	A	20011227		
WO 2002-JP13692	W	20021226		
OS MARPAT 139:85362				
G1				



AB Carboxylic acid amide deriva. represented by the formula (1) [wherein ring A = benzene ring, naphthalene ring, heterocyclic ring containing 1-4 heteroatoms selected from N, O, and S; W = C1-5 alkylene; Z = a single bond, phenylene; R1, R2 = H, halo, C1-5 alkyl, C1-10 alkoxy; R3 = H, halo, C1-12 alkyl, C2-5 alkynyl, trifluoromethyl, nceilylenyl, cyano, nitro, -CH2-R6, -Y-R11 [wherein R6 = C1-5 alkylthio, Q (wherein m = 0, 1; n = an

L5 ANSWER 12 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
 integer of 0-3), optionally substituted Ph or monocyclic heterocycli  
 contg. 1-3 heteroatoms selected from N, O, and S; Y = CO, O, S, SO2; R11 =  
 C1-10 alkyl, FCN2, CF2H, CF3, Ph, C1-5 alkyphenyl, C1-5 alkoxyphenyl,  
 C2-8 dialkylamino, cyclic amino; R4 = Q) [wherein R12 = H, C1-5 alkoxy,  
 PhO; q = an integer of 1-5; p = an integer of 10-24; R5 = H, C1-5 alkyl]  
 or pharmaceutically acceptable salts thereof are prepd. These compds.  
 inhibit the binding of ligands to VEGF receptor and thereby inhibit  
 neovascularization by inhibiting the VEGF-dependent proliferation of  
 vascular endothelial cell or inhibit increase in vasopermeability and are  
 useful for the treatment of diseases related to VEGF or neovascularization  
 such diabetic retinopathy, chronic rheumatism, solid tumor, cerebral edema  
 or injury related to ischemic reperfusion injury, psoriasis,  
 atherosclerosis, fiber proliferation of rear cryst. lens, angiogenesis  
 glaucoma, ageing yellow spot, thyroid hyperplasia, chronic inflammation,  
 pneumonia, nephrotic syndrome, decrease in immune function against tumor,  
 ascites retention, exudation of endocardium fluid, or retention of pleural  
 effusion. Thus, a suspension of 2.00 g 3-[4-(1-  
 octadecyloxy)phenyl]propionic acid and 3.26 g SOCl2 in 40 ml. benzene was  
 refluxed for 1.5 h, evapd. in vacuo to remove the solvent, successively  
 treated with 80 ml. CH2Cl2, 0.60 g aniline, and 1.45 g Et3N, and stirred at  
 room temp. for 2 h to give, after workup, 1.0 g N-phenyl-3-[4-(1-  
 octadecyloxy)phenyl]propanamide. The latter intermediate was dissolved in  
 1:5:1 mixt. of THF/DMF (30 mL), treated with 0.12 g NaH (60%) at room  
 temp., stirred for 30 min, treated dropwise with tert-Bu bromoacetate, and  
 stirred at room temp. for 14 h to give, after workup and recrystn. from  
 NaOH, N-[3-[4-(1-octadecyloxy)phenyl]propionyl]-N-phenylglycine.  
 N-[2-(2-methylphenyl)phenyl]-N-[3-[4-(1-octadecyloxy)phenyl]propionyl]glyc-  
 ine and N-[2-(5-phenyl-1,3,4-oxadiazol-2-yl)phenyl]-N-[3-[4-(1-  
 octadecyloxy)phenyl]propionyl]glycine at  $\mu$ g/mL inhibited the binding of  
 [125I]-VEGF to NIH3T3 cell expressing Flt-1- VEGF receptor by 61 and 59%,  
 resp.

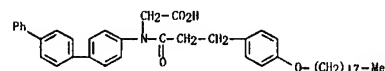
IT 556818-01-OP

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
 (Uses)

(Preparation of phenylpropanamide deriva. as antagonists of vascular  
 endothelial growth factor (VEGF) receptor and neovascularization  
 inhibitors for treating related to VEGF or neovascularization)

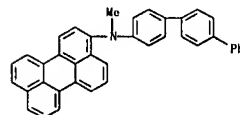
RN 556818-01-0 CAPLUS

CN Glycine, N-[3-[4-(octadecyloxy)phenyl]-1-oxopropyl]-N-[1,1':4',1''-  
 terphenyl]-4-yl- (9C1) (CA INDEX NAME)

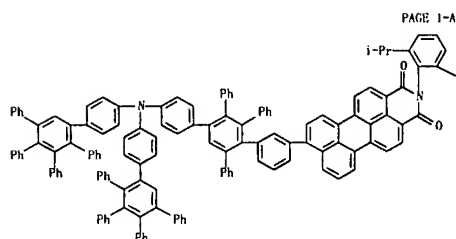
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMATL5 ANSWER 13 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2003:374064 CAPLUS

DN 138:376535  
 T1 Organic electroluminescent display having red light-emitting layer  
 IN Oh, Hyoung Yun; Lee, Sung Koo; Park, Chung Gun; Seo, Jeong Den; Kim, Myung  
 Seop  
 PA LG Electronics Co., Ltd., S. Korea  
 SO Jpn. Kokai Tokkyo Koho, 31 pp.  
 CODEN: JXXAAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

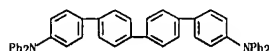
PAT. NO.	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003142269	A	20030516	JP 2002-293373	20021007 (—)
	KR 2003035283	A	20030509	KR 2001-67267	20011030 (—)
	US 2003118866	A1	20030626	US 2002-254999	20020926 (—)
	EP 1317005	A2	20030604	EP 2002-23135	20021015 (—)
	R: AT, BE, CH, DE, DK, ES, FR, GR, GB, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	CN 1416301	A	20030507	CN 2002-148125	20021030 (—)
PRA1	KR 2001-67267	A	20011030		
OS	MARPAT 138:376535				
AB	The display has a red light-emitting layer between electrodes, and the layer contains a guest substance of red-emitting substance and 22 host substances. Preferably, one of the host substances is a (substituted) quinoxaline derivative or a compound represented by (L1L2N)=-(NL3L4) [m + n = 1-8; z = A1, A2QA3: A1 = (substituted) aromatic hydrocarbylene, heterocyclic group, aliphatic hydrocarbylene; A2-3 = (substituted) aromatic hydrocarbylene, heterocyclic group; A1-3 are connected to N via aliphatic hydrocarbylene, amido, or imine; Q = (substituted) aromatic hydrocarbylene, heterocyclic ring, aliphatic hydrocarbylene, Group IIIA, IVA, VA, or VIA element; Q is connected to A2-3 via (substituted) aliphatic hydrocarbylene, Group IIIA, IVA, VA, or VIA element, amido, ester, carbonyl, azo, imine; L1-4 = (substituted) aromatic hydrocarbyl, heterocyclic group, aliphatic hydrocarbyl; silyl, H]. The display emits red light with high luminescent efficiency.				
IT	522653-14-1				
RL: DEV (Device component use); USES (Uses)					
(host: organic electroluminescent display having red light-emitting layer containing host substances for high luminescent efficiency)					
RN	522653-14-1 CAPLUS				
CN	3-Perylenamine, N-methyl-N-[1,1':4',1''-terphenyl]-4-yl- (9C1) (CA INDEX NAME)				



L5 ANSWER 14 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2003:335607 CAPLUS  
 DN 139:283194  
 TI Direct proof of electron transfer in a rigid first generation triphenylamine core dendrimer substituted with a peryleneimide acceptor  
 AU Lor, M.; Jordens, S.; De Belder, G.; Schweitzer, G.; Fron, E.; Viane, L.; Collet, M.; Weil, T.; Muellen, K.; Verhoeven, J. W.; Van der Auwerter, M.; De Schryver, F. C.  
 CS Department of Chemistry, Katholieke Universiteit Leuven, Heverlee, 3001, Belg.  
 SO Photochemical & Photobiological Sciences (2003), 2(5), 501-510  
 CODEN: PPSCHB; ISSN: 1474-905X  
 PB Royal Society of Chemistry  
 DT Journal  
 LA English  
 AB The combination of nanosecond transient absorption expts. and single photon timing expts. proved the occurrence of an electron transfer process in the tri-Ph amine core dendrimer, NIPI, by demonstrating the presence of an ion-pair absorption for NIPI in solvents of medium polarity. By means of femtosecond transient absorption measurements the rise time of this ion-pair absorption dominated by the radical anion absorption could be determined, resulting in a value of 180 ps in MeTHF and 138 ps in THF. Furthermore, in femtosecond fluorescence up-conversion as well as in monochromatic femtosecond transient absorption, a few ps component was resolved which was assigned to a vibrational and solvent relaxation process of the locally excited singlet state of the peryleneimide.  
 IT 460061-98-7  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PVP (Physical process); PROC (Process)  
 (photoinduced charge separation and recombination in first generation dendrimer containing triphenylamine core decorated with one peryleneimide acceptor)  
 RN 460061-98-7 CAPLUS  
 CN 1H-Perylo[3,4-cd]pyridine-1,3(2H)-dione, 2-[2,6-bis(1-methylethyl)phenyl]-8-[4'-(4-bis(3',4',5'-triphenyl[1,1':2',1''-terphenyl]-4-yl)amino)phenyl]-3',6'-diphenyl[1,1':2',1''-terphenyl]-3-yl)- (9CI) (CA INDEX NAME)



L5 ANSWER 15 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2003:151113 CAPLUS  
 DN 138:338644  
 TI Diphenylamino Group as an Effective Handle to Conjugated Donor-Acceptor Polymers through Electropolymerization  
 AU Leung, Man-kit; Chou, Meng-Yen; Su, Yuhong Oliver; Chiang, Chang Ling; Chen, Hung-Lin; Yang, Chin Fu; Yang, Chih-Chiang; Lin, Chang-Chih; Chen, Hung-Ting  
 CS Department of Chemistry, National Taiwan University, Taipei, 106, Taiwan  
 SO Organic Letters (2003), 5(6), 839-842  
 CODEN: ORLEPT; ISSN: 1523-7060  
 PB American Chemical Society  
 DT Journal  
 LA English  
 AB The diphenylamino group is an effective handle for electropolymerization to give electron donor-acceptor conjugated polymers. Five different monomers were prepared, but only one showed an oxidation current increase when the number of the cycles increased, indicated the formation of polymeric film on the electrode during cyclic voltammetry. Interesting electrochromic and photoresponsive behavior of the polymeric film was studied.  
 IT 145898-89-1P  
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (potential monomer: diphenylamino group monomer as an effective handle to conjugated donor-acceptor polymers through electropolymerization)  
 RN 145898-89-1 CAPLUS  
 CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4,4'''-diamine, N4,N4,N4''',N4'''-tetraphenyl- (CA INDEX NAME)



RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 14 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
 PAGE 1-8

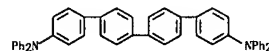
Pr-i

RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 16 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2003:143381 CAPLUS  
 DN 138:187508  
 TI Preparation of aromatic diamines by dimerization of aromatic halides  
 AU Kawamura, Hisayuki; Moriwaki, Fumio  
 PA Idemitsu Kosan Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JXXXXF

DT Patent  
 LA Japanese  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003055320	A	20030226	JP 2001-247018	20010816 <-
CN 1521160	A	20040818	CN 2003-103880	20030214
PRAI JP 2001-247018	A	20010816		
OS WARPAT 138:187508				
AB Ar1Ar2NAr3Ar3NAr1Ar2 [Ar1, Ar2 = (un)substituted 5- to 30-membered monovalent aromatic group; Ar3 = (un)substituted 5- to 30-membered divalent aromatic group; X = halo], useful as materials for heat-resistant electroluminescent devices and charge-transfer agents for electrophotographic receptors, are prepared by dimerization of Ar1Ar2NAr3X (Ar1-Ar3 = same as above; X = halo). Thus, NiCl2 was treated with Ph3P, Zn powder, and KI at 70-80° in vacuo, mixed with THF, and treated with N,N-di(4-diphenyl)-4-bromoaniline/THF at 65-70° for 10 h to give 64% N,N,N',N'-tetakis(4-diphenyl)-4,4'-benzidine, vs. 3% when prepared from N,N'-bis(4-diphenyl)-4,4'-benzidine and 4-iodobiphenyl.				
IT 145898-89-1P				
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)				
(preparation of aromatic diamines as materials for charge-transfer agents and electroluminescent devices with transition metal complexes as dimerization catalysts)				
RN 145898-89-1 CAPLUS				
CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4,4'''-diamine, N4,N4,N4''',N4'''-tetraphenyl- (CA INDEX NAME)				

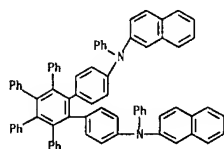


L5 ANSWER 17 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2003:132354 CAPLUS  
 DN 138:195597  
 TI Aromatic amine, manufacture of the amine, and organic electroluminescent device using the amine  
 IN Tanabe, Yoshimitsu; Shimamura, Takehiko; Ishida, Tsutomu; Totani, Yoshiyuki; Nakatsuka, Masakatsu  
 PA Mitsui Chemicals Inc., Japan  
 SO Jpn. Kokai Tokkyo Koho, 39 pp.  
 COBEN: JKKAF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1  

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003048868	A	20030221	JP 2001-233457	20010801 <--
PRAI JP 2001-233457		20010801		
OS WARPAT 138:195597				
GI				

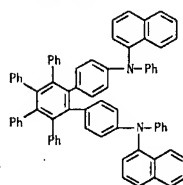
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The amine is that represented as I (XI-X4, A11-A25 involves amino group), which is manufactured by reaction of diphenylacetylene II and cyclopentadienone III (Xs and As are the same as I). The electroluminescent device involves a layer containing a of I, which may be a pos. hole-transporting layer or a light-emitting layer. The device shows enhanced stability and durability.  
 IT 498572-33-IP 498572-35-3P 498572-36-4P  
 498572-38-6P 498572-39-7P 498572-40-0P  
 498582-87-9P, 1,2-Bis(N,N-diphenyl-4'-aminophenyl)-3,4,5,6-tetraphenylbenzene  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (aromatic amine prepared from diphenylacetylene and cyclopentadienone for electroluminescent device)  
 RN 498572-33-1 CAPLUS  
 CN [1,1':2',1''-Terphenyl]-4,4''-diamine, N,N'-di-2-naphthalenyl-N,N',3',4',5',6'-hexaphenyl- (9CI) (CA INDEX NAME)

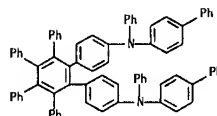


RN 498572-35-3 CAPLUS  
 CN [1,1':2',1''-Terphenyl]-4,4''-diamine, N,N'-di-1-naphthalenyl-N,N',3',4',5',6'-hexaphenyl- (9CI) (CA INDEX NAME)

L5 ANSWER 17 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

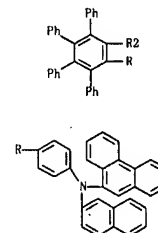


RN 498572-36-4 CAPLUS  
 CN [1,1':2',1''-Terphenyl]-4,4''-diamine, N,N'-bis([1,1'-biphenyl]-4-yl)-N,N',3',4',5',6'-hexaphenyl- (9CI) (CA INDEX NAME)



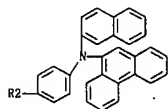
RN 498572-38-6 CAPLUS  
 CN [1,1':2',1''-Terphenyl]-4,4''-diamine, N,N'-di-2-naphthalenyl-N,N'-di-9-phenanthrenyl-3',4',5',6'-tetraphenyl- (9CI) (CA INDEX NAME)

PAGE 1-A

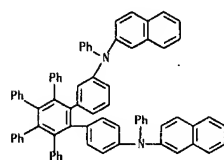


L5 ANSWER 17 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

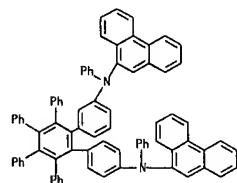
PAGE 2-A



RN 498572-39-7 CAPLUS  
 CN [1,1':2',1''-Terphenyl]-3,4''-diamine, N,N'-di-2-naphthalenyl-N,N',3',4',5',6'-hexaphenyl- (9CI) (CA INDEX NAME)

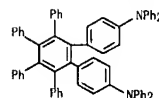


RN 498572-40-0 CAPLUS  
 CN [1,1':2',1''-Terphenyl]-3,4''-diamine, N,N'-di-9-phenanthrenyl-N,N',3',4',5',6'-hexaphenyl- (9CI) (CA INDEX NAME)



RN 498582-87-9 CAPLUS  
 CN [1,1':2',1''-Terphenyl]-4,4''-diamine, N,N',N',3',4',5',6'-octaphenyl- (9CI) (CA INDEX NAME)

L5 ANSWER 17 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



LS ANSWER 18 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2003:94721 CAPLUS

DN 138:144851

TI Organic electroluminescent device

IN Ozaki, Tadayoshi; Hirose, Eiichi; Okuda, Daisuke; Yoneyama, Hiroto; Seki, Mieko; Mashimo, Kiyokazu; Agata, Takashi; Sato, Katsuhiko; Nukada, Katsumi; Iwasaki, Masahiro

PA Fuji Xerox Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 31 pp.

CODEN: JXXXXF

DT Patent

LA Japanese

FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003036979	A	20030207	JP 2001-221292	20010723 <--
PRAI JP 2001-221292		20010723		

AB The invention refers to an electroluminescent device comprising at least one polyester with monomer -PhN(Ar)-X-(N(Ar)Ph)- or -PhPhN(Ar)-X-(N(Ar)Ph)k- [Ar = (un)substituted aromatic or 3-10 ring polycyclic aromatic or 2-10 ring condensed aromatic; X = (un)substituted divalent aromatic group; k = 0, 1] as a hole transport material.

IT 494784-00-8

RL: DEV (Device component use); USES (Uses)  
(organic electroluminescent device using aryl amine polyester hole transport material)

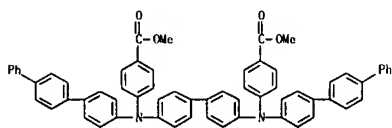
RN 494784-00-8 CAPLUS

CN Benzoic acid, 4,4'-[([1,1'-biphenyl]-4,4'-diylbis([1,1':4',1''-terphenyl])-4-ylidino)]bis-, dimethyl ester, polymer with 1,2-ethanediol (9CI) (CA INDEX NAME)

CM 1

CRN 494783-99-2

CMF C64 I48 N2 04



CM 2

CRN 107-21-1

CMF C2 I6 02

HO-CH2-CH2-OH

LS ANSWER 19 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:75532 CAPLUS

DN 138:144803

TI Organic electroluminescent device and blue luminescence component

IN Sato, Hideki; Sato, Yoshiharu; Ichinosawa, Akiko

PA Mitsubishi Chemical Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 23 pp.

CODEN: JXXXXF

DT Patent

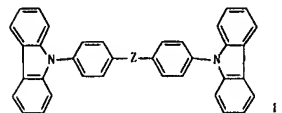
LA Japanese

FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003031371	A	20030131	JP 2001-216944	20010717 <--
PRAI JP 2001-216944		20010717		

OS WARPAT 138:144803

GI



AB The invention refers to an electroluminescent device comprising 1 [Z = divalent substituent; and the Ph and carbazolyl groups may be substituted] as a hole blocking layer.

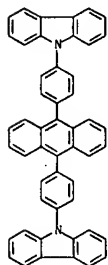
IT 194296-19-0

RL: PRP (Properties)  
(organic electroluminescent device and blue luminescence component using Ph carbazolyl derivative as hole blocking layer)

RN 194296-19-0 CAPLUS

CN 9H-Carbazole, 9,9'-(9,10-anthracenediylidene-4,1-phenylene)bis- (9CI) (CA INDEX NAME)

LS ANSWER 19 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



LS ANSWER 20 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:40471 CAPLUS

DN 138:114776

TI Organic electroluminescent element

IN Okuda, Daisuke; Seki, Mieko; Yoneyama, Hiroto; Hirose, Eiichi; Ozaki, Tadayoshi; Agata, Takashi; Mashimo, Kiyokazu; Sato, Katsuhiko

PA Fuji Xerox Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 28 pp.

CODEN: JXXXXF

DT Patent

LA Japanese

FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003017270	A	20030117	JP 2001-198265	20010629 <--
PRAI JP 2001-198265		20010629		

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The invention refers to an organic electroluminescent device comprising a diaryl amine polyester I or II [Ar = (un)substituted C3-10 univalent polycyclic aromatic or C2-10 condensed aromatic; X = (un)substituted divalent aromatic; T = divalent C1-6 straight chain or C2-10 branched hydrocarbon; k = 0, 1] as a hole transport material.

IT 485832-89-1

RL: DEV (Device component use); USES (Uses)  
(organic electroluminescent element with diaryl amine ester)

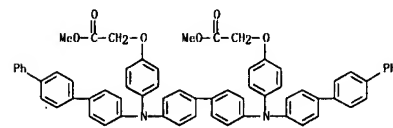
RN 485832-89-1 CAPLUS

CN Acetic acid, 2,2'-[([1,1'-biphenyl]-4,4'-diylbis([1,1':4',1''-terphenyl])-4-ylidino)-4,1-phenyleneoxy]bis-, dimethyl ester, polymer with 1,2-ethanediol (9CI) (CA INDEX NAME)

CM 1

CRN 485832-88-0

CMF C66 H52 N2 06



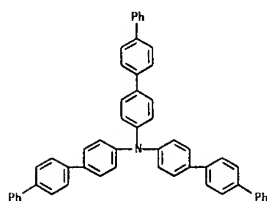
CM 2

CRN 107-21-1

CMF C2 I6 02

HO-CH2-CH2-OH

L5 ANSWER 21 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2003:18753 CAPLUS  
 DN 138:311438  
 TI A novel family of boron-containing hole-blocking amorphous molecular materials for blue- and blue-violet-emitting organic electroluminescent devices  
 AU Kinoshita, Motoi; Kita, Hiroshi; Shirota, Yasuhiko  
 CS Department of Applied Chemistry, Faculty of Engineering, Osaka University, Suita, 565-0871, Japan  
 SO Advanced Functional Materials (2002), 12(11-12), 780-786  
 CODEN: AFMDCB; ISSN: 1616-301X  
 PB Wiley-VCH Verlag GmbH & Co. KGaA  
 DT Journal  
 LA English  
 AB A novel family of amorphous mol. materials that function as hole blockers in organic electroluminescent (EL) devices, tris(2,3,5,6-tetramethylphenyl)borane (TPHB), tris(2,3,5,6-tetramethylbiphenyl-4-yl)borane (TBPhB), tris(2,3,5,6-tetramethyl-1,1':4',1''-terphenyl-4-yl)borane (TTPhB), and tris[4-(1,1':3',1''-terphenyl-5'-yl)-2,3,5,6-tetramethylphenyl]borane (TTPhPhB), have been designed and synthesized. They readily form stable amorphous glasses with high glass-transition temp., and are characterized by reversible cathodic reduction and relatively large HOMO-LUMO energy gaps. High-performance blue- and blue-violet-emitting organic EL devices have been developed using TBPhB, TTPhB, and TTPhPhB as hole blockers and N,N'-di(1-naphthyl)-N,N'-diphenyl[1,1'-biphenyl]-4,4'-diamine, tri(p-terphenyl-4-yl)amine, and N,N'-bis(3-methylphenyl)-N,N'-diphenyl[1,1'-biphenyl]-4,4'-diamine as emitters.  
 IT 145693-79-4  
 RL: DEV (Device component use); USES (Uses)  
 (emitter; performance of blue- and blue-violet-emitting electroluminescent display devices with borane derivative as hole-blocking amorphous material)  
 RN 145693-79-4 CAPLUS  
 CN (1,1':4',1''-Terphenyl)-4-amine, N,N-bis([1,1':4',1''-terphenyl]-4-yl)-(9C1) (CA INDEX NAME)



RE.CNT 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 23 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2002:781878 CAPLUS  
 DN 138:114312  
 TI Near-infrared electroluminescence in polymer composites based on organic nanocrystals  
 AU Maltsev, Eugene I.; Lypenko, Dmitry A.; Bobinkin, Vladimir V.; Tancev, Alek R.; Kirillov, Sergey V.; Shapiro, Boris I.; Schoo, Herman F. M.; Vannikov, Anatoly V.  
 CS Frumkin Institute of Electrochemistry of the Russian Academy of Sciences, Moscow, 117071, Russia  
 SO Applied Physics Letters (2002), 81(16), 3088-3090  
 CODEN: APPLAB; ISSN: 0003-6951  
 PB American Institute of Physics  
 DT Journal  
 LA English  
 AB IR electroluminescence was revealed in single-layer light-emitting diodes based on a type of electroactive polymer nanocomposites=electron-hole conducting aromatic polyimide and organic nanocryst. particles of cyanine mols., known as J-aggregates. These materials exhibit a very narrow emission band with a maximum at 815 nm. Dramatic increase of charge-carrier mobility was observed for these layers containing the J-aggregate nanocryst. phase.  
 IT 168026-63-9  
 RL: DEV (Device component use); PRP (Properties); USES (Uses)  
 (near-IR electroluminescence in polymer composites based on organic nanocrystals)  
 RN 168026-63-9 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)(3-oxo-1(3H)-isobenzofuranylidene)(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

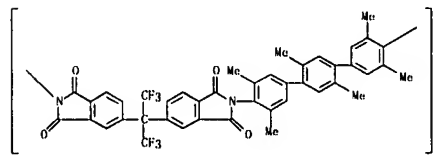
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*  
 RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 22 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2002:870536 CAPLUS  
 DN 138:262128  
 TI Electroluminescence Characteristics of Card Anthracene-containing Polyimide: The Effect of the Cathode and Anode Materials  
 AU Kolesnikov, V. A.; Brusentseva, M. A.; Romyantsev, B. M.; Berendyaev, V. I.; Vannikov, A. V.  
 CS Frumkin Institute of Electrochemistry, Russian Academy of Sciences, Moscow, 119071, Russia  
 SO Russian Journal of Electrochemistry (Translation of Elektrokimiya) (2002), 38(11), 1163-1172  
 CODEN: RJELE3; ISSN: 1023-1935  
 PB MAIK Nauka/Interperiodica Publishing  
 DT Journal  
 LA English  
 AB The effect of electrode materials on the characteristics of electroluminescence devices of the type transparent conductive substrate/polyimide/metallic electrode is studied. ITO. The reasons for variations in the electroluminescence spectra after replacing the substrate material and the metal of the top electrode are discussed. The applicability of the Fowler-Nordheim model for describing the injection of charge carriers in the electroluminescence devices under study is analyzed.  
 IT 168026-63-9  
 RL: PRP (Properties)  
 (effect of cathode and anode materials on electroluminescence characteristics of card anthracene-containing polyimide)  
 RN 168026-63-9 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)(3-oxo-1(3H)-isobenzofuranylidene)(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*  
 RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

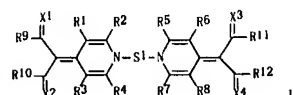
L5 ANSWER 24 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2002:757907 CAPLUS  
 DN 138:75308  
 TI Molecular modeling of polyimide membranes for gas separation  
 AU Neuchel, Matthias; Hofmann, Dieter  
 CS GKSS Research Center, Institute of Chemistry, Teltow, D-14513, Germany  
 SO Desalination (2002), 144(1-3), 67-72  
 CODEN: DSLNAH; ISSN: 0011-9164  
 PB Elsevier Science B.V.  
 DT Journal  
 LA English  
 AB Well-equilibrated mol. packing models were produced for 7 different polyimides. For all packings the transport properties (solubility and diffusion coefficient) were calculated for N<sub>2</sub> and CO<sub>2</sub> using the Gusev-Suter method. Comparison with exptl. data allowed to validate the quality of the model structures. A significant improvement to former results could be assessed for the predicted selectivity values.  
 IT 251480-50-9  
 RL: DEV (Device component use); USES (Uses)  
 (mol. modeling of polyimide membranes for gas separation)  
 RN 251480-50-9 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)(2,2,2-trifluoro-1-(trifluoromethyl)ethylidene)(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)(2',3',3'',5',5'',5'''-hexamethyl[1,1':4',1''-terphenyl]-4,4''-diyl)] (9C1) (CA INDEX NAME)



RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 25 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2002:707403 CAPLUS  
 DN 137:255414  
 TI Liquid crystal composite and liquid crystal device  
 IN Kato, Takashi  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 19 pp.  
 CODEN: JXXXXF  
 DT Patent  
 LA Japanese  
 FAN CNT 1

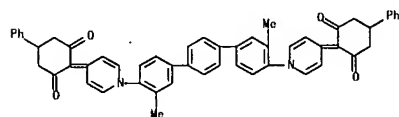
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002265947	A	20020918	JP 2001-66197	20010309 <--
JP 2001-66197		20010309		
MARPAT 137:255414				



AB The invention refers to a liquid crystal composite comprising a two color pigment with high order parameter and basic and acidic components in a chain A1-D1-S1-D2-L2-A2, [A1, A2 = acidic component; L1, L2 = conjugate chains; D1, D2 = basic component; S1 = single bond or chain] such as 1 [X1-4 = O or S; R1-8 = substituents; R9-12 = alkyl or aryl; R9,10 or R11,12 may join together to form rings; S1 = single bond or chain].

IT 461005-29-8P  
 RL: DEV (Device component use): SPN (Synthetic preparation): PREP  
 (Preparation): USES (Uses)  
 (Liquid crystal composite and liquid crystal device)

RN 461005-29-8 CAPLUS  
 CN 1,3-Cyclohexanedione, 2,2'-[(3,3'-dimethyl[1,1':4',1''-terphenyl])-4,4''-diyl]di-1(4H)-pyridinyl-4-ylidene]bis[5-phenyl]- (9C1) (CA INDEX NAME)

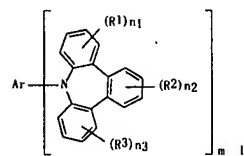


IT 461005-33-4  
 RL: RCT (Reactant): RACT (Reactant or reagent)  
 (Liquid crystal composite and liquid crystal device)

RN 461005-33-4 CAPLUS  
 CN 1,3-Cyclohexanedione, 2,2'-[(3,3'-dimethyl[1,1':4',1''-terphenyl])-4,4''-diyl]di-1(4H)-pyridinyl-4-ylidene]bis[5-(4-butylphenyl)- (9C1) (CA INDEX NAME)

L5 ANSWER 26 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2002:636628 CAPLUS  
 DN 137:176911  
 TI Benzoxazepine derivative luminescent material and luminescent element using  
 IN Igarashi, Tatsuya  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JXXXXF  
 DT Patent  
 LA Japanese  
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002235075	A	20020823	JP 2001-33683	20010209 <--
JP 2001-33683		20010209		
MARPAT 137:176911				



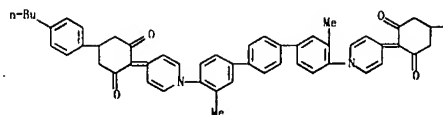
AB The luminescent materials are benzoxazepine derivs. represented by 1 (Ar = 21-valent aromatic hydrocarbonyl or aromatic heterocyclic group having condensed ring structure of 23 rings, optionally with (hetero)aryl and/or (hetero) arylene; R1-3 = substituent; n1-n3 = 0-4; n ≠ 1). The luminescent element contains the benzoxazepine derivs. in 21 of light-emitting layer and/or organic compound layer. The luminescent element has high brightness and durability. The benzoxazepine derivs. are also claimed.

IT 307531-15-3  
 RL: DEV (Device component use): TEM (Technical or engineered material use): USES (Uses)  
 (benzoxazepine derivative luminescent material for luminescent element with high brightness and durability)

RN 307531-15-3 CAPLUS  
 CN 9H-Tribenz(b,d,f)azepine, 9,9'-(9,10-anthracenediyl)di-4,1-phenylene]bis- (9C1) (CA INDEX NAME)

L5 ANSWER 25 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

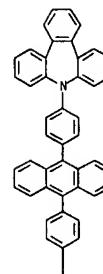


PAGE 1-B

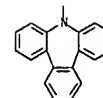


L5 ANSWER 26 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

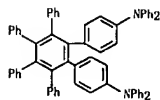


PAGE 2-A



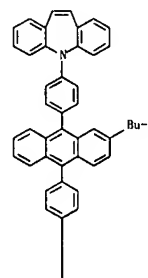


L5 ANSWER 27 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2002:622936 CAPLUS  
 DN 138:72964  
 TI Optically and thermally induced electron transfer pathways in  
 hexakis[4-(N,N-diarylamino)phenyl]benzene derivatives  
 AU Lambert, Christoph; Noll, Gilbert  
 CS Institut für Organische Chemie, Julius-Maximilians-Universität Würzburg,  
 Würzburg, 97074, Germany  
 SO Chemistry-A European Journal (2002), 8(15), 3467-3477  
 CODEN: CEJUED; ISSN: 0947-6539  
 PB Wiley-VCH Verlag GmbH  
 DT Journal  
 LA English  
 OS CASREACT 138:72964  
 AB The optically and thermally induced electron transfer pathways of highly  
 sym. (D3) hexanarybenzene systems with six triarylamino redox sites have  
 been investigated. Owing to slightly different local redox potentials,  
 the radical trication could be selectively generated by electrochem.  
 methods. This trication shows a strong intervalence charge-transfer band  
 in the near IR (NIR) that was measured by spectroelectrochem. and analyzed  
 using multi-dimensional Mulliken-Hush theory. Quantum chemical AM1 CI  
 calcs. indicate that there is no optically induced concerted  
 three-electron transfer that transforms the ground state into a state in  
 which all three pos. charged triarylamino moieties change place with their  
 neutral neighbors. The potential energy surface of the ground state was  
 constructed by using quadratic potentials. From this potential surface it  
 is apparent that there is also no thermally allowed concerted  
 three-electron transfer pathway. Instead, three consecutive one-electron  
 transfer steps are necessary for this process.  
 IT 479639-15-1  
 RL: PRP (Properties)  
 (dipole moment; preparation and optically and thermally induced electron  
 transfer pathways in hexakis[4-(N,N-diarylamino)phenyl]benzene  
 trications)  
 RN 479639-15-1 CAPLUS  
 CN [1,1':2',1''-Terphenyl]-4,4''-diamine, N,N,N',N',N'',N'-3',4',5',6'-octaphenyl-,  
 radical ion(1+) (9CI) (CA INDEX NAME)



RE.CNT 80 THERE ARE 80 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

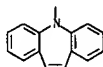
L5 ANSWER 28 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2002:600244 CAPLUS  
 DN 137:301604  
 TI Blue-Emitting Anthracenes with End-Capping Diarylamines  
 AU Danel, Krzysztof; Huang, Tai-Hsiang; Lin, Jiann T.; Tao, Yu-Tai; Chuen,  
 Chang-Hao  
 CS Institute of Chemistry, Academia Sinica, Taipei, WA, 115, USA  
 SO Chemistry of Materials (2002), 14(9), 3860-3865  
 CODEN: CMATEX; ISSN: 0897-4756  
 PB American Chemical Society  
 DT Journal  
 LA English  
 AB 2-Tert-butyl-9,10-bis(bromoaryl)anthracenes were synthesized from  
 2-tert-butyl-9,10-anthraquinone. Pd-catalyzed C-N bond formation between  
 these bromo compds. and diarylamines provides stable 2-tert-butyl-9,10-  
 diarylanthracenes containing two peripheral diarylamines (anth). They possess  
 high thermal decomposition temperature (Td > 450°) and form a stable glass (Tg  
 > 130°). Also, they are fluorescent in the blue region with  
 moderate to good quantum efficiencies. Two types of light-emitting diodes  
 (LED) were constructed from anth. (I) ITO/anth/TPBI/Mg:Ag and (II)  
 ITO/anth/Alq3/Mg:Ag, where TPBI and Alq3 are 1,3,5-tris(4-  
 phenylbenzimidazol-2-yl)benzene and tris(8-hydroxyquinolinato)aluminum,  
 resp. In type I devices, the anth function as the hole-transporting and  
 emitting material. In type II devices, emission from Alq3 is observed.  
 Several blue-light-emitting type I devices exhibit good maximum brightness  
 and phys. performance. The relation between the energy levels of the anth  
 and the performance of the light-emitting diode is discussed.  
 IT 468751-03-3P 468751-04-4P 468751-06-6P  
 RL: DEV (Device component use); PNU (Preparation, unclassified); PRP  
 (Properties); PREP (Preparation); USES (Uses)  
 (blue-emitting anthracenes with end-capping diarylamines and their  
 properties and applications)  
 RN 468751-03-3 CAPLUS  
 CN 5H-Dibenz[b,f]azepine, 5,5'-[12-[(1,1-dimethylethyl)-9,10-anthracenediyl]di-  
 4,1-phenylene]bis- (9CI) (CA INDEX NAME)



PAGE 1-A

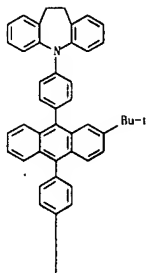
L5 ANSWER 28 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 2-A

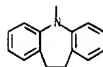


RN 468751-04-4 CAPLUS  
 CN 5H-Dibenz[b,f]azepine, 5,5'-[12-[(1,1-dimethylethyl)-9,10-anthracenediyl]di-  
 4,1-phenylene]bis[10,11-dihydro- (9CI) (CA INDEX NAME)

PAGE 1-A



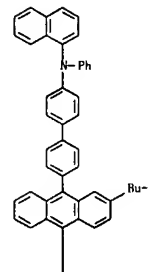
PAGE 2-A



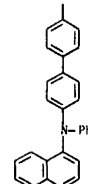
RN 468751-06-6 CAPLUS  
 CN 1-Naphthalenamine, N,N'-[12-[(1,1-dimethylethyl)-9,10-anthracenediyl]bis[1,1'-biphenyl]-4',4-diyl]bis[N-phenyl- (9CI) (CA INDEX NAME)

L5 ANSWER 28 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

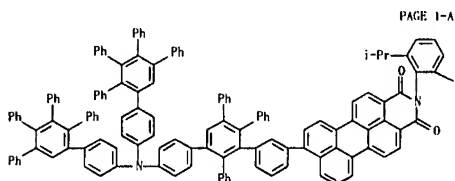


PAGE 2-A

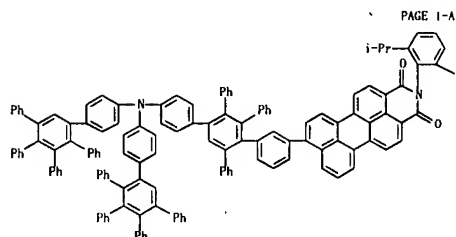


RE.CNT 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 29 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2002:558364 CAPLUS  
 DN 137:255178  
 TI Photoinduced electron transfer in a rigid first generation triphenylamine core dendrimer substituted with a peryleneimide acceptor  
 AU Lor, Marc; Thielemans, Jan; Vienne, Lucien; Cotellet, Mircea; Hofkens, Johan; Weil, Tanja; Hampel, Christinn; Muellen, Klaus; Verhoeven, Jan W.; Van der Auweras, Mark; De Schryver, Frans C.  
 CS Department of Chemistry, Katholieke Universiteit Leuven, Heverlee, 3001, Belg.  
 SO Journal of the American Chemical Society (2002), 124(33), 9918-9925  
 CODEN: JACSAT; ISSN: 0002-7863  
 PB American Chemical Society  
 DT Journal  
 LA English  
 AB The electron-transfer process of a first generation dendrimer with a triphenylamine core substituted with one peryleneimide chromophore at the rim (NIP1) was investigated by steady-state and time-resolved spectroscopic techniques in two different solvents of medium and low polarity. Single photon counting expts. showed a fast charge separation and a thermally activated back reaction, which is uncommon for a polyaryl bridge or long-distance through-space electron transfer. The four exponential fluorescence decay can be traced to the presence of two subsets of mols., which are constitutional isomers of NIP1. Although formally NIP1 resembles a donor-bridge-acceptor compound, detailed anal. of the data shows that the electron transfer occurs by a through-space mechanism. This amine core dendrimer has peculiar and unique characteristics resulting in the observation of efficient back transfer and delayed peryleneimide fluorescence in di-Et ether at 293 K and very long-lived charge recombination luminescence at 77 K.  
 IT 460061-97-6 460061-98-7  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process)  
 (photoinduced long-range intramol. forward and thermally activated back electron-transfers in triphenylamine core dendrimer containing peryleneimide acceptor)  
 RN 460061-97-6 CAPLUS  
 CN 1H-Perylo[3,4-cd]pyridine-1,3(2H)-dione, 2-[2,6-bis(1-methylethyl)phenyl]-8-[3'-[4-bis(3',4',5'-triphenyl[1,1':2',1''-terphenyl]-4-yl)amino]phenyl]-5',6'-diphenyl[1,1':2',1''-terphenyl]-3-yl]- (9C1) (CA INDEX NAME)



L5 ANSWER 29 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
 PAGE 1-B  
 Pr-i  
 RN 460061-98-7 CAPLUS  
 CN 1H-Perylo[3,4-cd]pyridine-1,3(2H)-dione, 2-[2,6-bis(1-methylethyl)phenyl]-8-[4'-[4-bis(3',4',5'-triphenyl[1,1':2',1''-terphenyl]-4-yl)amino]phenyl]-3',6'-diphenyl[1,1':2',1''-terphenyl]-3-yl]- (9C1) (CA INDEX NAME)

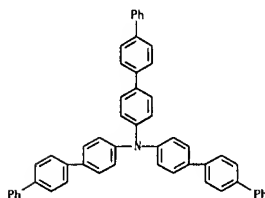


PAGE 1-B  
 Pr-i  
 RE.CNT 109 THERE ARE 109 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 30 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2002:538438 CAPLUS  
 DN 137:101420  
 TI Electron beam- or X-ray-sensitive chemically amplified negative photoresist compositions with high sensitivity and resolution  
 IN Takahashi, Omote; Shirakawa, Hiroshi; Adegawa, Yutaka  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 51 pp.  
 CODEN: JKKXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1  

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002202601	A	20020719	JP 2000-401983	20001228 <--
JP 2000-401983		20001228		

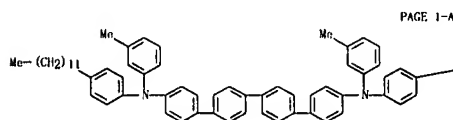
 AB The photoresist compns. comprise (A) photoacid generators, (B) water-insol. and alkali-soluble resins, (C) crosslinkers for curing the resins in the presence of acids, and (D) compds. for increasing hole mobility of the compns.  
 IT 145593-79-4  
 RL: WMA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (hole mobility modifier; electron-beam or X-ray chemical amplified neg. photoresists with high sensitivity and resolution containing hole mobility modifiers)  
 RN 145593-79-4 CAPLUS  
 CN [1,1':4',1''-Terphenyl]-4-amine, N,N'-bis([1,1':4',1''-terphenyl]-4-yl)- (9C1) (CA INDEX NAME)



L5 ANSWER 31 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2002:466589 CAPLUS  
 DN 137:54571  
 TI High mobility charge transporting molecules for a charge transport layer  
 IN Yanus, John F.; Pai, Damador M.; Silvestri, Markus R.; Fuller, Timothy J.; Ioannidis, Andronique  
 PA Xerox Corporation, USA  
 SO U.S. Pat. Appl. Publ., 13 pp., Cont.-in-part of U.S. Ser. No. 610,648, abandoned.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 2  

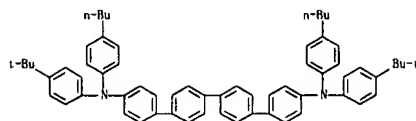
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002076632	A1	20020620	US 2001-976061	20011015 <--
US 2000-610648	B2	20000630		

 AB This invention disclosed arylidiamine charge transporting mols. having high mobility by increasing the number of phenylene groups between the nitrogen atoms, and these mols. are used in electrophotog. photoconductors. These arylidiamines have the formula (X-Ph)(Y-Ph)-N-(Ph)n-N-(Ph-Y)(Ph-X) (Ph represents a phenylene group; (Ph)n consists of ortho- and/or para-conjugated unsubstituted phenylene groups; X, Y = H or a C1-20 alkyl group; and n is an integer greater than 3). A charge transport layer is prepared by molecularly dispersing or dissolving the arylidiamine charge transporting mol. in a polymeric binder.  
 IT 398483-78-6P 398483-78-8P  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (high mobility charge transport compound used in electrophotog. photoreceptor)  
 RN 398483-78-6 CAPLUS  
 CN [1,1':4',1''-4',1'''-Quaterphenyl]-4,4'''-diamino, N,N'-bis(4-dodecylphenyl)-N,N'-bis(3-methylphenyl)- (9C1) (CA INDEX NAME)



PAGE 1-B  
 Pr-i  
 RN 398483-78-8 CAPLUS  
 CN [1,1':4',1''-4',1'''-Quaterphenyl]-4,4'''-diamino, N,N'-bis(4-butylphenyl)-N,N'-bis(4-(1,1-dimethylethyl)phenyl)- (9C1) (CA INDEX NAME)

L5 ANSWER 31 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



L5 ANSWER 32 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2002:367195 CAPLUS

DN 136:377206

T1 Organic hole transporting and blue light emitting electroluminescent materials

IN Liu, Jin-Ming; Hsieh, Huan-Lun; Lu, Po-Yen; Wang, Ying-Chun

PA Industrial Technology Research Institute, Taiwan

SD U.S., 11 pp.

CODEN: USXXAM

DT Patent

LA English

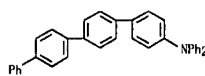
FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 US 6387545	B1	20020514	US 1999-292773	19990414 <--
PRA1 US 1999-292773		19990414		
OS MARPAT 136:377206				

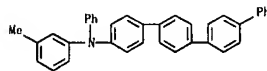
AB Tertiary amine imparted quaterphenyl compds. are described by the general formula  $R1C6H4-N(R2C6H4)-(P-C6H4)3-C6H4R3$  ( $R1$  and  $R2$  = independently selected H, C1-5 alkyl, or C6-12 aryl; and  $R3$  = H, C1-5 alkyl, vinyl, or aryl vinyl). The compds. may be used in forming a hole-transporting layer, a blue light-emitting layer, or a combined hole-transporting and light-emitting layer in organic electroluminescent devices. Devices incorporating the compds. and methods for adding hole-transporting capabilities to light-emitting materials by mixing the compds. into them are also described.

IT 423775-66-OP 423775-67-IP 423775-68-2P  
 RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (organic hole-transporting and blue-emitting electroluminescent materials based on quaterphenyl amine derivs. and devices using them)

RN 423775-66-0 CAPLUS  
 CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4-amine, N,N-diphenyl- (9C1) (CA INDEX NAME)

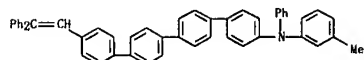


RN 423775-67-1 CAPLUS  
 CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4-amine, N-(3-methylphenyl)-N-phenyl- (9C1) (CA INDEX NAME)

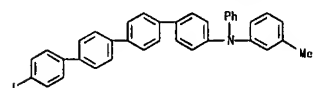


RN 423775-68-2 CAPLUS  
 CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4-amine, 4'''-(2,2-diphenylethenyl)-N-(3-methylphenyl)-N-phenyl- (9C1) (CA INDEX NAME)

L5 ANSWER 32 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



IT 423775-69-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (organic hole-transporting and blue-emitting electroluminescent materials based on quaterphenyl amine derivs. and devices using them)  
 RN 423775-69-3 CAPLUS  
 CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4-amine, 4'''-iodo-N-(3-methylphenyl)-N-phenyl- (9C1) (CA INDEX NAME)



RE, CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 33 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2002:313485 CAPLUS

DN 136:332595

T1 Organic electroluminescent device containing hole-transporting polyester layers

IN Seki, Miko; Okuda, Daisuke; Yoneyama, Hiroto; Hirose, Eichi; Washino, Kiyokazu; Agata, Takashi; Sato, Katsuhiko

PA Fuji Xerox Co., Ltd., Japan

SD Jpn. Kokai Tokkyo Koho, 26 pp.

CODEN: JXXAF

DT Patent

LA Japanese

FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 JP 2002124388	A	20020426	JP 2000-313190	20001013 <--
JP 3893869	B2	20070314		
US 2002182440	A1	20021205	US 2001-973800	20011011 <--
US 6652995	B2	20031125		
PRA1 JP 2000-313190	A	20001013		

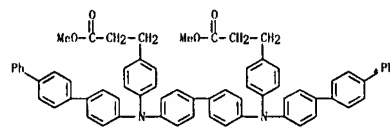
AB The invention relates to an organic electroluminescent device comprising the hole-transporting layer made of the polyesters containing 2 repeating partial structures represented by  $-TC6H4N(Ar)X(N(Ar)C6H4)kT-$  and/or  $-TC6H4-C6H4N(Ar)X(N(Ar)C6H4-C6H4)kT-$  ( $Ar$  = polyarom. (un)substituted with 3-10 aromatic rings or monovalent condensed aromatic (un)substituted with 2-10 aromatic rings;  $X$  = (un)substituted divalent aromatic group;  $T$  = C1-6 divalent straight hydrocarbyl; or C2-10 divalent branched hydrocarbyl;  $k$  = 0 or 1).

IT 415715-36-5 415715-38-7  
 RL: DEV (Device component use); USES (Uses)  
 (organic electroluminescent device containing hole-transporting polyester layers)

RN 415715-36-5 CAPLUS  
 CN Benzenepropanoic acid, 4,4'-[[1,1'-biphenyl]-4,4'-diylbis([1,1':4',1'''-terphenyl]-4-ylidino)]bis-, dimethyl ester, polymer with 1,2-ethanedial (9C1) (CA INDEX NAME)

CM 1

CRN 415715-35-4  
 OMF C68 H56 N2 O4



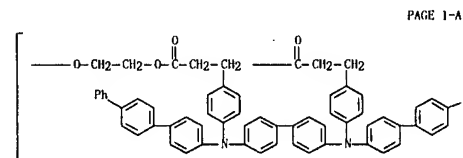
CM 2

CRN 107-21-1  
 OMF C2 H6 O2

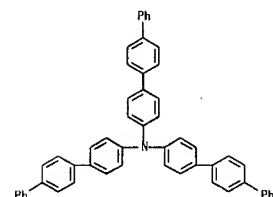
HO-CH2-CH2-OH

RN 415715-38-7 CAPLUS  
 CN Poly[oxy-1,2-ethanedioxy(1-oxo-1,3-propanediyl)-1,4-

L5 ANSWER 33 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
 AN 2002:299588 CAPLUS  
 DN 137:101065  
 TI Development of hole-blocking amorphous molecular materials and their application in organic light-emitting diodes  
 AU Shiota, Yasuhiko; Kinoshita, Motoi; Okumoto, Kenji  
 CS Department of Applied Chemistry, Faculty of Engineering, Osaka University, Yamadaoka, Suita, Osaka, 565-0871, Japan  
 SO Proceedings of SPIE-The International Society for Optical Engineering (2002), 4464(Organic Light-Emitting Materials and Devices V), 203-210  
 CODEN: PSISDG; ISSN: 0277-786X  
 PB SPIE-The International Society for Optical Engineering  
 DT Journal  
 LA English  
 AB A novel class of amorphous mol. materials, 1,3,5-tris(4-biphenyl)benzene (TBB), 1,3,5-tris(4-fluorobiphenyl-4'-yl)benzene (F-TBB), 1,3,5-tris(9,9-dimethylfluoren-2-yl)benzene (TFB), and 1,3,5-tris(4-(9,9-dimethylfluoren-2-yl)phenyl)benzene (TFPB), function as hole-blocking materials in organic electroluminescent (EL) devices. 1,3,5-Tris[5-(dimethylsilyl)thiophen-2-yl]benzene (TMP-TB) was also found to function as an electron transporter with better hole-blocking properties relative to tris(8-quinolinolato)aluminum. These materials, which readily form stable amorphous glasses with well-defined glass-transition temps., were characterized by relatively high oxidation potentials and large HOMO-LUMO energy gaps. The use of these materials as hole blockers in multilayer organic EL devices permitted efficient blue-violet emission from emitters with hole transporting properties, e.g., N,N'-bis(3-methylphenyl)-N,N'-diphenyl-[1,1'-biphenyl]-4,4'-diamine (TPD), N,N'-bis(4-biphenyl)-N,N'-diphenyl-[1,1'-biphenyl]-4,4'-diamine (p-BPD), N,N'-bis(9,9-dimethylfluoren-2-yl)aniline (F2PA), N,N'-bis(9,9-dimethylfluoren-2-yl)-N,N'-diphenyl-9,9-dimethylfluoren-2,7-diamine (PFPA), and N,N,N',N'-tetrakis(9,9-dimethylfluoren-2-yl)-[1,1'-biphenyl]-4,4'-diamine (FPD).



L5 ANSWER 35 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2002:299588 CAPLUS  
 DN 137:101065  
 TI Development of hole-blocking amorphous molecular materials and their application in organic light-emitting diodes  
 AU Shiota, Yasuhiko; Kinoshita, Motoi; Okumoto, Kenji  
 CS Department of Applied Chemistry, Faculty of Engineering, Osaka University, Yamadaoka, Suita, Osaka, 565-0871, Japan  
 SO Proceedings of SPIE-The International Society for Optical Engineering (2002), 4464(Organic Light-Emitting Materials and Devices V), 203-210  
 CODEN: PSISDG; ISSN: 0277-786X  
 PB SPIE-The International Society for Optical Engineering  
 DT Journal  
 LA English  
 AB A novel class of amorphous mol. materials, 1,3,5-tris(4-biphenyl)benzene (TBB), 1,3,5-tris(4-fluorobiphenyl-4'-yl)benzene (F-TBB), 1,3,5-tris(9,9-dimethylfluoren-2-yl)benzene (TFB), and 1,3,5-tris(4-(9,9-dimethylfluoren-2-yl)phenyl)benzene (TFPB), function as hole-blocking materials in organic electroluminescent (EL) devices. 1,3,5-Tris[5-(dimethylsilyl)thiophen-2-yl]benzene (TMP-TB) was also found to function as an electron transporter with better hole-blocking properties relative to tris(8-quinolinolato)aluminum. These materials, which readily form stable amorphous glasses with well-defined glass-transition temps., were characterized by relatively high oxidation potentials and large HOMO-LUMO energy gaps. The use of these materials as hole blockers in multilayer organic EL devices permitted efficient blue-violet emission from emitters with hole transporting properties, e.g., N,N'-bis(3-methylphenyl)-N,N'-diphenyl-[1,1'-biphenyl]-4,4'-diamine (TPD), N,N'-bis(4-biphenyl)-N,N'-diphenyl-[1,1'-biphenyl]-4,4'-diamine (p-BPD), N,N'-bis(9,9-dimethylfluoren-2-yl)aniline (F2PA), N,N'-bis(9,9-dimethylfluoren-2-yl)-N,N'-diphenyl-9,9-dimethylfluoren-2,7-diamine (PFPA), and N,N,N',N'-tetrakis(9,9-dimethylfluoren-2-yl)-[1,1'-biphenyl]-4,4'-diamine (FPD).



RE. CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 34 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2002:306956 CAPLUS  
 DN 137:161071  
 TI Organic polymeric light-emitting devices  
 AU Vannikov, A. V.  
 CS Inst. Elektrokhim. im. A. N. Frumkina, RAN, Moscow, 117071, Russia  
 SO Rossiiskii Khimicheskii Zhurnal (2001), 45(5-6), 41-50  
 CODEN: RKZHEZ; ISSN: 1024-6215  
 PB Rossiiskoe Khimicheskoe Obshchestvo im. D. I. Mendeleeva  
 DT Journal  
 LA Russian  
 AB The author developed new materials for polymeric light-emitting devices. The preparation methods can be used in other optoelectronics. The electronic transport in polymer layers is discussed.  
 IT 168026-63-9  
 RL: DEV (Device component use); PRP (Properties); USES (Uses)  
 (organic polymeric light-emitting devices)  
 RN 168026-63-9 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)(3-oxo-1(3H)-isobenzofuran-1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)

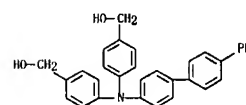
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

L5 ANSWER 36 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2002:292211 CAPLUS  
 DN 136:332559  
 TI Organic electroluminescent devices  
 IN Okuda, Daisuke; Seki, Wako; Yonayama, Hiroto; Hirose, Eiichi; Agata, Takashi; Mashimo, Kiyokazu; Sato, Katsuhiko  
 PA Fuji Xerox Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 19 pp.  
 CODEN: JKXAXF  
 DT Patent  
 LA Japanese  
 FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002117983	A	20020419	JP 2000-309614	20001010 <--
JP 3855641	B2	20061213		
PRAI JP 2000-309614		20001010		

AB The invention relates to an organic electroluminescent device comprising the hole-transporting layer made of the polyurethane containing the repeating partial structures represented by -C6H4N(Ar)X[N(Ar)C6H4]k- and/or -C6H4-C6H4N(Ar)X[N(Ar)C6H4-C6H4]k- [Ar = polynuclear arom. with 3-10 aromatic rings; and X = divalent aromatic group; k = 0 or 1].  
 IT 413603-80-2 413603-81-3  
 RL: DEV (Device component use); USES (Uses)  
 (organic electroluminescent devices)  
 RN 413603-80-2 CAPLUS  
 CN Benzenemethanol, 4,4'-bis-([1,1':4',1''-terphenyl]-4-ylimino)bis-, polymer with 1,6-diisocyanatohexane (9C1) (CA INDEX NAME)  
 CN 1  
 CRN 413603-79-9  
 CMF C32 H27 N 02



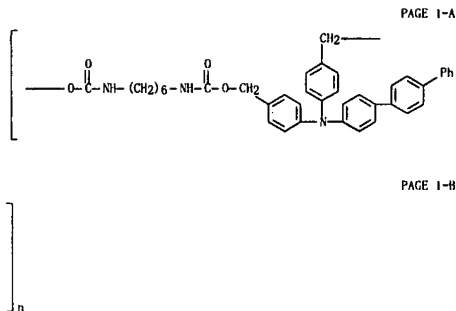
CM 2

CRN 822-06-0  
 CMF C8 H12 N2 O2

OCN- (CH2)6-NCO

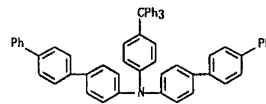
RN 413603-81-3 CAPLUS  
 CN Poly[oxy-carbonylimino-1,6-hexanediyliminocarbonyloxymethylene-1,4-phenylene([1,1':4',1''-terphenyl]-4-ylimino)-1,4-phenylenemethylene] (9C1) (CA INDEX NAME)

L5 ANSWER 36 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

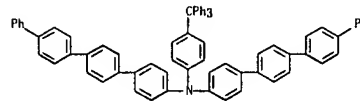


L5 ANSWER 37 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2002:219992 CAPLUS  
 DN 136:270189  
 TI Organic electroluminescent devices  
 IN Hashimoto, Mitsuru; Suzuki, Mutsumi; Fukuyama, Masao  
 PA Matsushita Electric Industrial Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 13 pp.  
 CUDEN: JXXXXF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 JP 2002083685	A	20020322	JP 2001-192228	20010626 <--
PRA1 JP 2000-194198	A	20000628		
OS MARPAT 136:270189				
AB	The devices comprise a tetraaryl methane derivative Ar1Ar2Ar3Ar4C [Ar1-4 = (substituted) aromatic hydrocarbyl or arom heterocyclic hydrocarbyl group].			
IT	404943-13-1 404943-14-2 404943-15-3			
RL: DEV (Device component use): USES (Uses)	(organic electroluminescent devices)			
RN	404943-13-1 CAPLUS			
CN	[1,1':4',1''-Terphenyl]-4-amine, N-[1,1':4',1''-terphenyl]-4-yl-N-[4-(triphenylmethyl)phenyl]- (9C1) (CA INDEX NAME)			

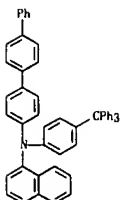


RN 404943-14-2 CAPLUS  
 CN [1,1':4',1''-Quaterphenyl]-4-amine, N-[1,1':4',1''-quaterphenyl]-4-yl-N-[4-(triphenylmethyl)phenyl]- (9C1) (CA INDEX NAME)



RN 404943-15-3 CAPLUS  
 CN 1-Naphthalenamine, N-[1,1':4',1''-terphenyl]-4-yl-N-[4-(triphenylmethyl)phenyl]- (9C1) (CA INDEX NAME)

L5 ANSWER 37 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



L5 ANSWER 38 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2002:193381 CAPLUS  
 DN 136:254354  
 TI Organic electroluminescent device  
 IN Hirose, Eiichi; Okada, Daisuke; Yonoyama, Hiroto; Saki, Mieke; Washimo, Kiyokazu; Agata, Takashi; Sato, Katsuhiro  
 PA Fuji Xerox Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 25 pp.  
 CUDEN: JXXXXF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 JP 2002075654	A	20020315	JP 2000-256801	20000828 <--
US 2002050597	A1	20020502	US 2001-938675	20010827 <--
US 6670052	B2	20031230		
PRA1 JP 2000-256801	A	20000828		
GI				

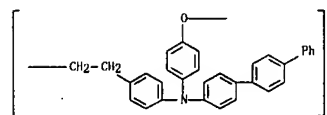
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The invention relates to an organic electroluminescent device comprising organic layers sandwiched between a cathode and an anode, wherein the organic layers comprises a charge transporting polyether containing the structure represented by I and II [Ar = polynuclear aroms. with 3-10 rings, and condensed aroms. with 2-10 rings; X = divalent aromatic group; Y = C1-6 divalent normal chain hydrocarbon and C2-10 divalent branched hydrocarbon; m = 1-3 integer; q = 0 or 1].

IT 403820-73-5  
 RL: DEV (Device component use): USES (Uses)  
 (organic electroluminescent device)

RN 403820-73-5 CAPLUS

CN Poly[oxy-1,4-phenylene([1,1':4',1''-terphenyl]-4-ylimino)-1,4-phenylene-1,2-ethanediy] (9C1) (CA INDEX NAME)



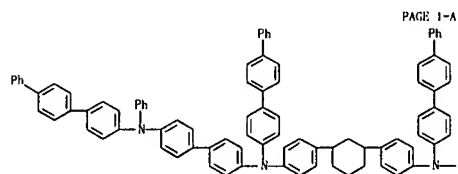
L5 ANSWER 39 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2002:129108 CAPLUS  
 DN 136:191475  
 TI Arylamine compound  
 IN Kimura, Toshihide; Miki, Tetsuzo; Nakanishi, Naoko  
 PA Hodogaya Chemical Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JXXXXF  
 DT Patent  
 LA Japanese  
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002053533	A	20020219	JP 2000-243790	20000811 <--
PRAI JP 2000-243790		20000811		
OS MARPAT 136:191475				

AB The invention refers to a hole transport or electroluminescent material comprising [Ph-C6H4-p-C6H4N(C6H4R1)]X[(C6H4R2)Np-C6H4-p-C6H4Ph] [X = (p-C6H4R)n, naphthylene, 9,10-anthracenyl, 1,6-pyrenyl, cyclohexylidenebiphenylene, fluorenylidenebiphenylene, p-C6H4N(Ph)C6H4-p and p-C6H4VC6H4-p; R = H, (un)substituted alkyl, alkoxy, Ph; n = 1-3; Y = O, S, (un)substituted alkyl, alkoxy, Ph, biphenyl or p-C6H4N(C6H4R3)p-C6H4p-C6H4Ph (1); R1 = R2 when R1 or R2 is not 1; R3 = H, (un)substituted alkyl, alkoxy, Ph or biphenyl].

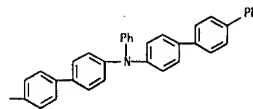
IT 398460-89-4  
 RL: DEV (Device component use); USES (Uses)  
 (arylamine compound)

RN 398460-89-4 CAPLUS  
 CN [1,1'-Biphenyl]-4,4'-diamine, N,N'-(1,3-cyclohexanediyldi-4,1-phenylene)bis[N-phenyl-N,N'-bis([1,1':4',1''-terphenyl]-4-yl)]- (9C1) (CA INDEX NAME)

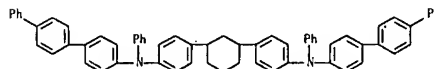


L5 ANSWER 39 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-B



IT 398460-90-7  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (arylamine compound)  
 RN 398460-90-7 CAPLUS  
 CN [1,1':4',1''-Terphenyl]-4-amine, N,N'-(1,3-cyclohexanediyldi-4,1-phenylene)bis[N-phenyl- (9C1) (CA INDEX NAME)



L5 ANSWER 40 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2002:119609 CAPLUS  
 DN 136:191637

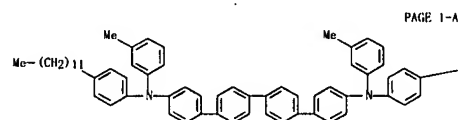
TI Electrophotographic photoconductor part using high-mobility charge-transporting molecule  
 IN Yanus, John F.; Pai, Damodar M.; Silvestri, Markus R.; Fuller, Timothy J.; Ioannidis, Andronique  
 PA Xerox Corp., USA  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JXXXXF  
 DT Patent  
 LA Japanese  
 FAN CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002049166	A	20020215	JP 2001-189134	20010622 <--
PRAI US 2000-610648	A	20000630		
OS MARPAT 136:191637				

AB The part has an elec. conductor layer, optionally a charge-shielding layer, optionally an adhesive layer, a charge-generating layer, and a charge-transporting layer containing arylidiamine (X(C6H4)(Y(C6H4)nN(C6H4Y)(C6H4X) (X, Y = H, C1-20 alkyl; n ≥ 4) dispersed or dissolved in a polymer binder.

IT 398483-76-6P 398483-78-8P  
 RL: IMP (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (electrophotog. photoconductor containing high-mobility charge-transporting diaryldiamine)

RN 398483-76-6 CAPLUS  
 CN [1,1':4',1''-4'',1'''-Quaterphenyl]-4,4''-diamine, N,N'-bis(4-dodecylphenyl)-N,N'-bis(3-methylphenyl)- (9C1) (CA INDEX NAME)

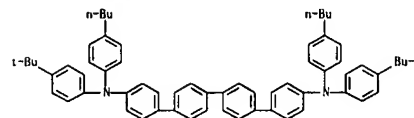


PAGE 1-B

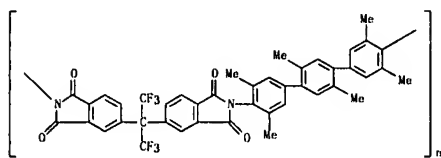
-(CH2)11-Me

RN 398483-78-8 CAPLUS  
 CN [1,1':4',1''-4'',1'''-Quaterphenyl]-4,4''-diamine, N,N'-bis(4-butylphenyl)-N,N'-bis(4-(1,1-dimethylethyl)phenyl)- (9C1) (CA INDEX NAME)

L5 ANSWER 40 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



AN ANSWER 41 OF 24 CAPLUS COPYRIGHT 2007 ACS on STN  
AS 2002:101799 CAPLUS  
DN 136:295464  
TI Free Volume and Transport Properties in Highly Selective Polymer Membranes  
AU Nagel, C.; Guenther, Lehraut, F.; Fritsch, D.; Strunskus, T.; Faupel, F.  
CS Technische Hochschule, Karlsruhe, Fed. Materialverbunde,  
Kernforschungsanstalt, Universität zu Kiel, Kiel, D-24143, Germany  
SO Macromolecules (2002), 35(6), 2071-2077  
CODEN: MAMOHX; ISSN: 0024-9297  
PR American Chemical Society  
DT Journal  
LA English  
AB Varying systematically the structure of glassy poly(amide imide),  
poly(ester imide), and polyimide, we have studied the correlation between  
free volume and transport properties of highly selective polymer membranes.  
Free volume data were determined by means of positron annihilation lifetime  
spectroscopy (PALS) while transport properties originate from (inert gas)  
measurements of permanent gases. We find a good correlation between PALS  
average hole size and transport coeffs. The correlation is much better than  
with free volume data from group contribution methods. It is shown that the  
permeation properties are controlled not only by free volume fluctuations  
but also by energy barriers. A diffusive transport model taking into  
account the effect of the cohesive energy  $\epsilon_c$  and of the energy barriers  
further improves the correlation significantly.  
IT 251480-50-9  
RL: PRP (Properties); TEN (Technical or engineered material use); USES  
(Uses)  
(free volume and gas diffusion in polyimide-polyimide,  
polyester-polyimide and polyimide membranes)  
RN 251480-50-9 CAPLUS  
CN Poly[1,3-di-hydro-1,3-dioxo-2H-isindol-2,5-diyl][2,2,2-trifluoro-1-  
(trifluoromethyl)ethylidene][1,3-di-hydro-1,3-dioxo-2H-isindol-5,2-  
diyl][2,2,3,3'-tetrahydro[1,1',4',1''-terphenyl]-4,4'-diyl]]  
(9C1) (CA INDEX NAME)



RE.CNT 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD  
/ ALL CITATIONS AVAILABLE IN THE RE FORMAT

LS ANSWER 42 OF 201 CAPLUS COPYRIGHT 2007 ACS ON STN  
AN 2001:823340 CAPLUS  
DN 135:364614  
TI triphenylamine, carbazole, or triphenylbenzene derivatives and  
electroluminescent devices using them  
IN Shirota, Yasuhiko  
PA Japan  
SD Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JRXAXF  
DT Patent  
LA Japanese  
FAN, CNT 1

	<u>PATENT NO.</u>	<u>KIND</u>	<u>DATE</u>	<u>APPLICATION NO.</u>	<u>DATE</u>
PJ	JP 2001316338	A	20011113	JP 2000-71723	20000315
PRAI	JP 2000-51209	A	20000228		
OS	WARPAT 135:364614				
GI					

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

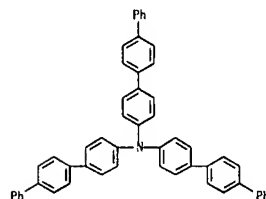
AB Triphenylamine derivs. I (R1, R2 = substituent), carbazole derivs. II (R1, R2 = substituent), and triphenylbenzene derivs. III (R1, R2 = substituent) are claimed. Also claimed are electroluminescent devices having a hole injection layer containing I, II, or III. The electroluminescent devices show high fluorescence intensity, high luminance efficiency, and high heat resistance.

IT 45693-79-4

RI: DEY (device component use); USES (Uses)  
(triphenylamine, carbazole or triphenylbenzene derivs. for hole injection layer of heat-resistant electroluminescent devices)

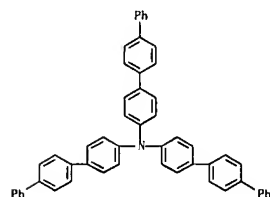
IN 45693-79-4, CAPLUS  
[1,1'-4,4'-bis(4-phenyl)-4-amine, N,N-bis([1,1':4',1''-(terphenyl)-4-yl)-9C]]

CR [CA INDEX NAME]

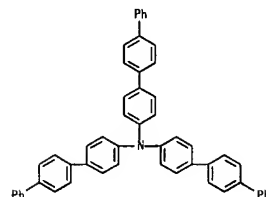


LS ANSWER 43 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2001:626018 CAPLUS  
DN 135:187696  
TI Electroluminescent device containing new electron transport substance for  
improving luminous properties, heat-resistance, and durability  
IN Shirota, Yasuhiko  
PA Japan  
SO Jpn. Kokai Tokkyo Koho. 7 pp.  
CO CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN

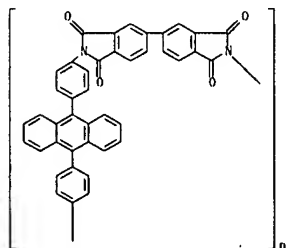
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001233882	A	20010828	JP 2000-51210	20000228
PRAI JP 2000-51210		20000228		
AB	The invention relates to an electroluminescent display device which contains 1,3,5-tris[5-(dimethylboryl)-2-thienyl]benzene in an electron transport layer. The electroluminescent display device contains tris(terphenyl-4-yl)amine in a luminous layer. The electroluminescent display device contains an organic compound selected from 4,4',4''-tris(3-methylphenylphenylamino)triphenylamine, 4,4',4''-tris(2-naphthylphenylamino)triphenylamine, 4,4',4''-tris(biphenyl-2-yl)phenylamino)triphenylamine, 4,4',4''-tris(biphenyl-3-yl)phenylamino)triphenylamine, 4,4',4''-tris(biphenyl-4-yl)(3-methylphenylamino)triphenylamine, and 4,4',4''-tris[9,9-dimethyl-2-fluorenyl(phenyl)amino]triphenylamine in a pos. hole injection layer. The electroluminescent device is suitable for blue- and full color-flat panel displays.			
IT 145693-79-4P	RL: DEV (device component use); PEP (Physical, engineering or chemical process); PRU (Preparation, unclassified); PREP (Preparation); PROC (Process); USES (Uses) (in luminous layer: electroluminescent device containing new electron transport substance for improving luminous properties, heat-resistance, and durability)			
RN 145693-79-4, CAPLUS				
CN [1,1',4',4''-terphenyl]-4-amine, N,N-bis([1,1':4',1''-terphenyl]-4-yl)-[9C1] (CA INDEX NAME)				



L5 ANSWER 44 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2001:523722 CAPLUS  
UN 135:114246  
TI Electroluminescent devices  
IN Shirota, Yasuhiko  
PA Osaka University, Japan  
SO Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKKXAF  
DT Patent  
LA Japanese  
FAN. CNT 1  
PATENT NO. KIND DATE APPLICATION NO. DATE  
PI JP 2001196183 A 20010719 JP 2000-1400 20000107 (<  
PRAI JP 2000-1400 20000107  
AR The devices comprise: a glass substrate; an ITO electrode; a hole  
transport phosphor layer comprising tri-(o-terphenyl-4-yl)amine and/or  
tri(p-terphenyl-4-yl)amine; an electron transport phosphor layer  
comprising 5,5'-bis[di(4-Me boryl)-2,2'-bithiophene] and a MgAg electrode.  
IT 145993-79-4  
RI: DEV (Device component use); USES (Uses)  
(Electroluminescent devices)  
RN 145993-79-4, CAPLUS  
CN 145993-79-4, tri-(o-terphenyl)-4-amine, N,N-bis[1,1':4',1''-terphenyl]-4-yl)-  
[9C], [CA INDEX NAME]

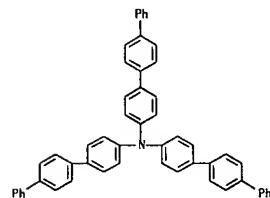


L5 ANSWER 45 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2001:522854 CAPLUS  
 DN 135:242815  
 TI Bipolar transport in aromatic polyimides  
 AU Tameev, A. R.; Kozlov, A. A.; Vannikov, A. V.; Berendyaev, V. I.; Lunina, E. V.; Kotov, B. V.  
 CS Frumkin Institute of Electrochemistry, Russian Academy of Sciences, Moscow, 117071, Russia  
 SO Molecular Crystals and Liquid Crystals Science and Technology, Section A: Molecular Crystals and Liquid Crystals (2001), 361, 101-106  
 CODEN: MCLCEP; ISSN: 1058-725X  
 PB Gordon & Breach Science Publishers  
 DT Journal  
 LA English  
 AB Electron and hole drift mobilities were measured by the time-of-flight technique in films of aromatic polyimides based on 9,10-bis(p-aminophenyl)anthracene or 9,10-bis(phenylthio)anthracene and a series of diimide fragments. The elec. field and temperature dependences of the mobilities were detected. In amorphous films of the soluble polyimide, the drift mobility was found to reach the value of 10<sup>-4</sup> cm<sup>2</sup> V<sup>-1</sup> s<sup>-1</sup> at 5.5×10<sup>5</sup> V cm<sup>-1</sup>. In the insol. polyimides films, the mobility was lower by one or two orders of magnitude. This is attributed to the presence of cavities in the films of the insol. polyimides.  
 IT 106725-35-3 168026-63-9 202343-27-9  
 RL: PRP (Properties)  
 (bipolar transport in aromatic polyimides)  
 RN 106725-35-3 CAPLUS  
 CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isindole]-2,2'-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)



RN 168026-63-9 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isindole-2,5-diyl)(3-oxo-1(3H)-isobenzofuran-1-ylidene)(1,3-dihydro-1,3-dioxo-2H-isindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)

L5 ANSWER 46 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2001:505799 CAPLUS  
 DN 135:242261  
 TI 1,3-bis[5-(dimethylboryl)thiophen-2-yl]benzene and 1,3,5-tris[5-(dimethylboryl)thiophen-2-yl]benzene as a novel family of electron-transporting hole blockers for organic electroluminescent devices  
 AU Kinoshita, Motoshi; Shirota, Yasuhiro  
 CS Department of Applied Chemistry, Faculty of Engineering, Osaka University, Suita, 565-0871, Japan  
 SO Chemistry Letters (2001), (7), 614-615  
 CODEN: CMLTAG; ISSN: 0366-7022  
 PB Chemical Society of Japan  
 DT Journal  
 LA English  
 OS CASREACT 135:242261  
 AB A novel family of electron-transporting hole blockers, 1,3-bis[5-(dimethylboryl)thiophen-2-yl]benzene and 1,3,5-tris[5-(dimethylboryl)thiophen-2-yl]benzene (TMB-TB), were designed and synthesized. They exhibit multiple redox behavior in electrochem. reduction and to readily form stable amorphous glasses with high glass-transition temps. >100°. TMB-TB was proven to function well as a hole blocker in blue-emitting organic electroluminescent devices.  
 IT 145693-79-4  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (blue emitter in blue-emitting organic electroluminescent device)  
 RN 145693-79-4 CAPLUS  
 CN [1,1':4',1''-terphenyl]-4-amine, N,N-bis[1,1':4',1''-terphenyl]-4-yl- (9C1) (CA INDEX NAME)



RE. CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 45 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
 \* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*  
 RN 202343-27-9 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isindole-2,5-diyl)sulfonyl(1,3-dihydro-1,3-dioxo-2H-isindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)

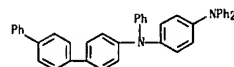
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*  
 RE. CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 47 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2001:472850 CAPLUS  
 DN 135:84034  
 TI Thin film electroluminescent devices  
 AU Satou, Tetsuya; Matsuo, Mikiko; Sugiura, Hisanori; Hisada, Hitoshi; Shingae, Ryuichi; Murauchi, Yoshinobu  
 SO Matsushita Electric Industrial Co., Ltd., Japan  
 SA PCT Int. Appl., 86 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001046335	A1	20010628	WO 2000-JP9064	20001220 <=
WF: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
JP 2002056981	A	20020222	JP 2000-384568	20001219 <=
JP 3614365	B2	20050126		
EP 1195422	A1	20020410	EP 2000-987670	20001220 <=
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 2003082400	A1	20030501	US 2001-913644	20010817 <=
US 6682832	B2	20040127		
US 2004076854	A1	20040422	US 2003-718554	20031124
US 6989201	B2	20060124		
JP 2004184464	A	20040503	JP 2004-32348	20040209
JP 3793537	B2	20060705		
PRA1 JP 1999-360247	A	19991220		
JP 2000-162031	A	20000531		
JP 2000-384568	A3	20001219		
WO 2000-JP9064	W	20001220		
US 2001-913644	A1	20010817		

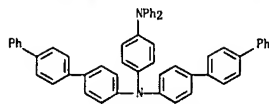
AB An electroluminescent device with a high luminous efficiency, a low drive voltage and a long life is presented. The luminescent layer of the thin film EL device is made of a charge transfer luminescent material whose mol. has a part contributing to charge transfer and a part where at least 2 mol. orbitals contributing to radiative transition are localized and which contributes to emission.  
 IT 346610-66-0 346610-68-2  
 RL: PRP (Properties)  
 (thin film electroluminescent devices)  
 RN 346610-66-0 CAPLUS  
 CN 1,4-benzenediamine, N,N'-bis[1,1':4',1''-terphenyl]-4-yl- (9C1) (CA INDEX NAME)



RN 346610-68-2 CAPLUS  
 CN 1,4-benzenediamine, N,N'-bis[1,1':4',1''-terphenyl]-4-yl- (9C1) (CA INDEX NAME)



L5 ANSWER 47 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 48 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

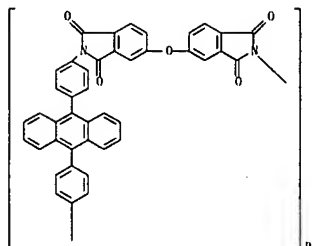
AN 2001:400163 CAPLUS  
DN 136:103028  
TI Charge carrier transport in aromatic polyimides and polyimide/J-aggregate composites  
AU Tameev, Alek R.; Kozlov, Aleksey A.; Mal'isev, Eugene I.; Lypenko, Dmitry A.; Bobonkin, Vladimir V.; Vannikov, Anatoly V.  
CS Frumkin Institute of Electrochemistry of the Russian Academy of Sciences, Moscow, 117071, Russia  
SD Proceedings of SPIE-The International Society for Optical Engineering (2001), 4105(Organic Light-Emitting Materials and Devices IV), 443-449  
CODEN: PSISUG; ISSN: 0277-786X  
PB SPIE-The International Society for Optical Engineering  
DT Journal  
LA English  
AB Charge carrier transport in aromatic polyimides based on 9,10-bis(aminophenyl)anthracene or 9,10-bis(phenylthio)anthracene and their composites with dye J-aggregates was studied using conventional time-of-flight techniques. The elec. field and temperature dependencies of both hole and electron drift mobility were observed. In amorphous films of the soluble polyimide, the drift mobility was found to reach the value of 10-4 cm<sup>2</sup> V<sup>-1</sup> s<sup>-1</sup>. In films of the insol. polyimide containing a crystalline phase, the mobility was lower by one or two orders of magnitude. The result is attributed to the presence of cavities in the crystalline film. The applicability of known theor. models describing the temperature and elec. field dependencies of mobility is discussed. J-aggregates, formed in the soluble polyimides doped with cyanine dye mols., play an active role in charge carrier transport in the electroluminescence composites.  
IT 106725-36-4 133030-08-7 168026-63-9  
202343-27-9  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PPOC (Process)  
(charge carrier transport in aromatic polyimides and polyimide/J-aggregate composites)  
RN 106725-36-4 CAPLUS  
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

RN 133030-08-7 CAPLUS  
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)

L5 ANSWER 48 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 168026-63-9 CAPLUS  
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)(3-oxo-1(3H)-isobenzofuranylidene)(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

RN 202343-27-9 CAPLUS  
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)sulfonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 49 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2001:375334 CAPLUS  
DN 134:366693  
TI Preparation of bis(aminalkyl- or amidophenoxy)arylene- and heteroatom-interrupted alkanes and analogs as triptase inhibitors  
AU Anderskewitz, Ralf; Braun, Christine; Hamma, Rainer; Disao, Bernd; Jennewein, Hans Michael; Speck, Georg  
PA Boehringer Ingelheim Pharma K.-G., Germany  
SD Ger. Offen., 36 pp.  
CODEX: GWXXB  
DT Patent  
LA German  
FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 19955476	A1	20010523	DE 1999-19955476	19991118 <--
US 6780863	B1	20040824	US 2000-699747	20001030
CA 2391085	A1	20010525	CA 2000-2391085	20001114 <--
WO 2001036374	A2	20010525	WO 2000-EP11216	20001114 <--
WO 2001036374	A3	20020411		
W: AE, AU, BG, BR, CA, CN, CZ, EE, HU, ID, IL, IN, JP, KR, LT, LV, MX, NO, NZ, PL, RO, SG, SI, SK, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TW				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
EP 1250317	A2	20021023	EP 2000-987242	20001114 <--
EP 1250317	B1	20050914		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY, TR				
JP 2003514792	T	20030422	JP 2001-538866	20001114 <--
AT 304527	T	20050915	AT 2000-987242	20001114
ES 224932	T3	20060401	ES 2000-987242	20001114
PRAI DE 1999-19955476	A	19991118		
US 1999-167774P	P	19991129		
WO 2000-EP11216	W	20001114		
OS MARPAT 134:366693				
AB B1(1)Z2X2X3X3X4Z4B2 [1: B1, B2 = C(NR1)NR1', CH2NH2, CH2CH2NH2, ureido; R1, R1' = OH, COR2, COR2'; R2 = H, alkyl, aryl(alkyl); X1-X4 = bond, CH2, CH2CH2, CH2O, CH2NH, etc.; Z = (heteroatom-interrupted)alkylene, G1(CH2)rG2 (X2 or X3 = (CH2)1-2), E1(CH2)rE2, etc.; E1, E2 = azacycloalkylene; G1, G1 = bond or cycloalkylene; Z1-Z4 = (un)substituted (hetero)arylene; r = 0-6] were prepared Thus, 3-(CH2C1C3H4CH2C3H4(CH2CH2NH2)C4) was condensed with (CH2CMe2NH2)2 to give, after deprotection, the N,N'-bis(benzoyloxy)hexandiamine.4HCl. Data for biol. activity of 1 were given.				
IT 340284-65-3P 340285-01-OP				
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PRP (Preparation); USES (Uses) (preparation of bis(aminalkyl- or amidophenoxy)arylene- and heteroatom-interrupted alkanes and analogs as triptase inhibitors)				
RN 340284-65-3 CAPLUS				
CN Benzenecarboximidamide, 4,4'-[1,1':4',1'':4'',1''':4''',1''''':4''''',1''''':-sexiphenyl]-4,4'-diylbis[(methylimino)methylene-3,1-phenylene(methyleneoxy)]bis- (9C1) (CA INDEX NAME)				



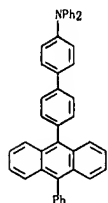
L5 ANSWER 52 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2000:694280 CAPLUS  
 DN 133:259476  
 TI Amino or styryl compound, organic thin film, and electroluminescent device  
 IN Hosokawa, Chishio; Funahashi, Masakazu; Azuma, Hisahiro; Ikeda, Shuji;  
 Arai, Hiromasa  
 PA Idemitsu Kosan Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 30 pp.  
 CODEN: JXAXAF  
 DT Patent  
 LA Japanese  
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000273056	A	20001003	JP 1999-352216	19991210 <-
JP 1999-10660	A	19990119		

OS MARPAT 133:259476  
 AB The compound comprises DIAR(X<sub>2</sub>)<sub>n</sub> (I: Ar<sub>1</sub> = C<sub>6</sub>-30 di- or trivalent aromatic group; X<sub>1</sub>, X<sub>2</sub> = styryl, styrylaryl, diarylamino, diarylaminoaryl; n = 0, 1; if X<sub>1</sub> or X<sub>2</sub> = the styryl group, then D<sub>1</sub> = C<sub>16</sub>-60 aromatic group having 24 carbon rings; if X<sub>1</sub> and X<sub>2</sub> = the amino group, then D<sub>1</sub> = C<sub>20</sub>-60 aromatic group having 25 carbon rings). I shows good heat resistance (glass transition temperature ≥90°) and long luminescence lifetime.

IT 294881-18-8P  
 RI: PND (Preparation, unclassified); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (amino or styryl compound for heat-resistant organic thin film or electroluminescent device)

RN 294881-18-8 CAPLUS  
 CN [1,1'-Biphenyl]-4-amine, N,N-diphenyl-4'-(10-phenyl-9-anthracenyl)- (9C1)  
 (CA INDEX NAME)



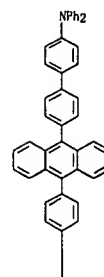
IT 279672-13-8 294881-30-4 294881-31-5  
 294881-32-6 294881-37-1 294881-38-2  
 294881-39-3 294881-40-6

RI: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (amino or styryl compound for heat-resistant organic thin film or electroluminescent device)

RN 279672-13-8 CAPLUS  
 CN [1,1'-Biphenyl]-4-amine, 4',4'''-(9,10-anthracenediyl)bis[N,N-diphenyl]- (9C1) (CA INDEX NAME)

L5 ANSWER 52 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A



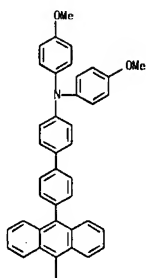
PAGE 2-A



RN 294881-30-4 CAPLUS  
 CN [1,1'-Biphenyl]-4-amine, N,N-bis(4-methoxyphenyl)-4'-(10-phenyl-9-anthracenyl)- (9C1) (CA INDEX NAME)

L5 ANSWER 52 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

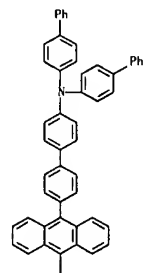


PAGE 2-A



RN 294881-31-5 CAPLUS  
 CN [1,1'-Biphenyl]-4-amine, N,N-bis([1,1'-biphenyl]-4-yl)-4'-(10-phenyl-9-anthracenyl)- (9C1) (CA INDEX NAME)

PAGE 1-A



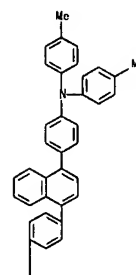
L5 ANSWER 52 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 2-A

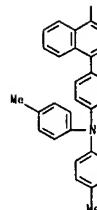


RN 294881-32-6 CAPLUS  
 CN Benzenamine, 4,4'-(1,4-phenylenedi-4,1-naphthalenediyl)bis[N,N-bis(4-methylphenyl)- (9C1) (CA INDEX NAME)

PAGE 1-A

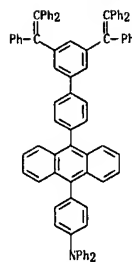


PAGE 2-A

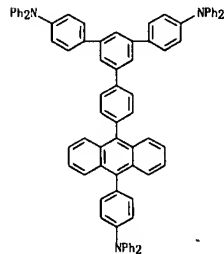


RN 294881-37-1 CAPLUS  
 CN Benzenamine, 4-[10-[3',5'-bis(triphenylethenyl)][1,1'-biphenyl]-4-yl]-9-anthracenyl]-N,N-diphenyl- (9C1) (CA INDEX NAME)

L5 ANSWER 52 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

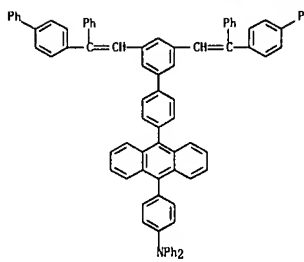


RN 294881-38-2 CAPLUS  
 CN [1,1':3',1''-Terphenyl]-4,4''-diamine, 5'-[4-[10-[4-(diphenylamino)phenyl]-9-anthracenyl]phenyl]-N,N,N',N'-tetraphenyl- (9CI) (CA INDEX NAME)

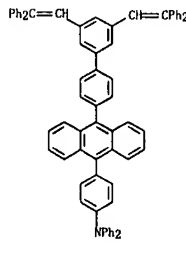


RN 294881-39-3 CAPLUS  
 CN Benzenamine, 4-[10-[3',5'-bis(2-[1,1'-biphenyl]-4-yl-2-phenylethenyl)][1,1'-biphenyl]-4-yl]-9-anthracenyl]-N,N-diphenyl- (9CI) (CA INDEX NAME)

L5 ANSWER 52 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 294881-40-6 CAPLUS  
 CN Benzenamine, 4-[10-[3',5'-bis(2,2-diphenylethenyl)][1,1'-biphenyl]-4-yl]-9-anthracenyl]-N,N-diphenyl- (9CI) (CA INDEX NAME)



L5 ANSWER 53 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2000:631876 CAPLUS

DN 133:230365

TI Aromatic amino compounds, their preparation, and uses in electroluminescent element or electrophotographic photoreceptor

IN Fujino, Yasumitsu; Ueda, Hideaki; Furukawa, Keiichi

PA Minolta Camera Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 35 pp.

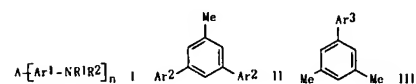
CODEN: JNXXAF

DT Patent

LA Japanese

FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000247932	A	20000912	JP 1999-52513	19990301 <—
JP 1999-52513		19990301		
OS MARPAT 133:230365				
GI				

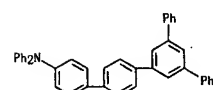


AB The amino compds. A(Ar1NR1R2)n [1: A = Q1, Q2; Ar2, Ar3 = (substituted) aryl; Ar1 = (substituted) arylene; R1, R2 = alkyl, aralkyl, (substituted) aryl, (substituted) aromatic heterocyclyl; n = 1, 2] are prepared by reaction of A(Ar1X)n (A, Ar1, n = same as I; X = halo) with (NR1R2) (R1, R2 = same as I). I show high charge-transporting ability, luminescence, and durability.

IT 292148-71-1 292148-72-2 292148-73-3  
 292148-75-5 292148-76-6 292148-81-3  
 292148-82-4

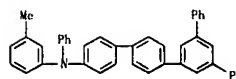
RL: DEV (Device component use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (preparation of aromatic amino compds. for electroluminescent element or electrophotog. photoreceptor)

RN 292148-71-1 CAPLUS  
 CN [1,1':3',1''-4,4''-Quaterphenyl]-4'''-amine, N,N,5'-triphenyl- (9CI) (CA INDEX NAME)

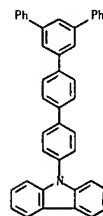


RN 292148-72-2 CAPLUS  
 CN [1,1':3',1''-4,4''-Quaterphenyl]-4'''-amine, N-(3-methylphenyl)-N,5'-diphenyl- (9CI) (CA INDEX NAME)

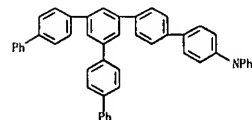
L5 ANSWER 53 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 292148-73-3 CAPLUS  
 CN 9H-Carbazole, 9-(5'-phenyl[1,1':3',1''-4,4''-Quaterphenyl]-4'''-yl)- (9CI) (CA INDEX NAME)

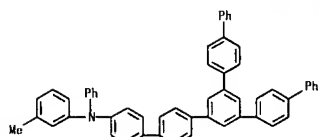


RN 292148-75-5 CAPLUS  
 CN [1,1':4',1''-3',1'''-Quinquephenyl]-4-amine, 5'-[1,1'-biphenyl]-4-yl-N,N-diphenyl- (9CI) (CA INDEX NAME)

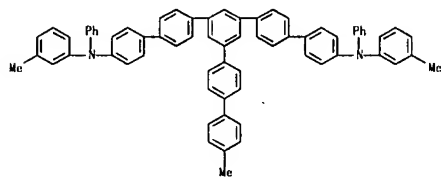


RN 292148-76-6 CAPLUS  
 CN [1,1':4',1''-3',1'''-Quinquephenyl]-4-amine, 5'-[1,1'-biphenyl]-4-yl-N-(3-methylphenyl)-N-phenyl- (9CI) (CA INDEX NAME)

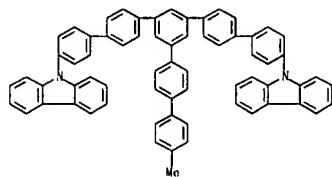
L5 ANSWER 53 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 292148-81-3 CAPLUS  
 CN [1,1':4',1'':3'',1''':4''',1''''-Quinquephenyl]-4,4''''-diamine,  
 5,1'-(4'-methyl[1,1'-biphenyl]-4-yl)-N,N'-bis(3-methylphenyl)-N,N'-diphenyl-  
 (9C1) (CA INDEX NAME)



RN 292148-82-4 CAPLUS  
 CN 9H-Carbazole, 9,9'-(5''-(4'-methyl[1,1'-biphenyl]-4-yl)[1,1':3'',1''':4''',1''''-quinquephenyl]-4,4''''-diyl)bis- (9C1)  
 (CA INDEX NAME)



L5 ANSWER 55 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2000:578482 CAPLUS

DN 133:267329

TI Electroluminescent properties of anthracene-containing polyimides

AU Mal'tsev, Eugene I.; Brusentseva, Maria A.; Lypenko, Dmitry A.; Berendynov, Vladimir I.; Kolesnikov, Vladislav A.; Kotov, Boris V.; Vannikov, Anatoly V.

CS Frumkin Institute of Electrochemistry of the Russian Academy of Sciences, Moscow, 117071, Russia

SO Polymers for Advanced Technologies (2000), 11(7), 325-329

CODEN: PADTES; ISSN: 1042-7147

PB John Wiley &amp; Sons Ltd.

DT Journal

LA English

AB Optical and electroluminescent properties of a new soluble anthracene-containing polyimide (ACPI) was studied. Solubility of ACPI in organic solvents allows direct spin casting of the polymer films exhibiting intense photo- and electroluminescence (EL) in the visible range. This nonconjugated polymer was used as emitting and electron-hole transporting layers in polymer light-emitting devices (LEDs). EL properties of the uni- and bilayer LEDs are discussed in terms of the band structure, bipolar transport and electron donor-acceptor interactions.

IT 168026-63-9

RL: PRP (Properties)

(electroluminescent properties of anthracene-containing polyimides)

RN 168026-63-9 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)(3-oxo-1(3H)-isobenzofuranylidene)(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*  
 RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE.FORMAT

L5 ANSWER 54 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2000:624819 CAPLUS

DN 133:215440

TI Electrophotographic photoconductor with n-type charge generation substance

AU In Yokota, Saburo

PA Dainippon Ink and Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JXXXXF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 JP 2000242006	A	20000908	JP 1999-14192	19990122 <--
PRA1 JP 1998-362514	A	19981221		

AB The invention relates to the electrophotog. photoconductor including the n-type charge generation material-containing charge generation layer with the layer thickness of  $\geq 5 \mu\text{m}$ . The work function difference between the charge transport layer and the charge generation layer is  $\geq 0.2 \text{ eV}$ .

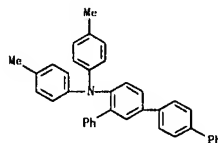
IT 290294-11-0

RL: DEV (Device component use); USES (Uses)

(charge transport material in electrophotog. photoconductor with  $\geq 5 \mu\text{m}$  thick n-type charge generation layer)

RN 290294-11-0 CAPLUS

CN [1,1':3'',1''':4''',1''''-Quaterphenyl]-6'-amine, N,N-bis(4-methylphenyl)-  
 (9C1) (CA INDEX NAME)



L5 ANSWER 56 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2000:462275 CAPLUS

DN 134:116413

TI Electroluminescent properties of anthracene-containing polyimides

AU Mal'tsev, Eugene I.; Brusentseva, Maria A.; Berendynov, Vladimir I.; Kolesnikov, Vladislav A.; Kotov, Boris V.; Vannikov, Anatoly V.

CS Frumkin Institute of Electrochemistry, Russian Academy of Sciences, Moscow, Russia

SO Proceedings of SPIE-The International Society for Optical Engineering (1999), 3797(Organic Light-Emitting Materials and Devices II), 350-358

CODEN: PSISDG; ISSN: 0277-786X

PB SPIE-The International Society for Optical Engineering

DT Journal

LA English

AB The electroluminescence (EL) of donor-acceptor polyimides prepared from 9,10-bis(m-aminophenylthio)-anthracene (BPTA) and 1,3-bis(3,4-dicarboxyphenoxy)benzene or 2,2-bis[4-(3,4-dicarboxyphenoxy)phenyl]-propane dianhydrides was studied. The aromatic polyimides with and without sulfur atoms in the backbone, were evaluated as electron-hole transporting and light-emitting materials for use in single- and multilayer electroluminescent diodes. These polyimides are efficient electron and hole conductors and also exhibit intense photoluminescence of exciplex origin. Some of the polyimides have been used as hole conducting layers with tria(8-quinolinolato)aluminum complex (Alq3) as electron conducting layer in bilayer LEDs of high brightness. A direct correlation was revealed between transport characteristics and electroluminescent properties of these electroactive materials. At room temperature, the electron mobility and hole drift mobility directly measured by conventional TOF techniques indicate effective bipolar transport. The simplicity of synthesis, high thermal stability, organic solvent solubility, and excellent film-forming ability make these polyimides good candidates for technol. applications. The band structure, bipolar transport, and electron donor-acceptor interactions in test one-layer and bilayer LEDs based on the polyimides are described.

IT 168026-63-9

RL: PRP (Properties)

(band structure and electroluminescence and carrier transport of electroactive anthracene-containing polyimide-polythioethers vs. polyimides for LEDs)

RN 168026-63-9 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)(3-oxo-1(3H)-isobenzofuranylidene)(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*  
 RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE.FORMAT

L5 ANSWER 57 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2000:462255 CAPLUS  
 DN 133:273891  
 TI Organic light-emitting diodes using novel emitting amorphous molecular materials

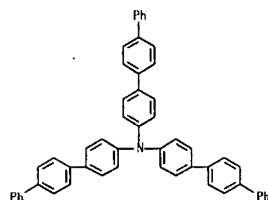
AU Shirota, Yasuhiko; Noda, Tetsuya; Ogawa, Hiromitsu  
 CS Faculty of Eng., Dep. Appl. Chem., Osaka Univ., Suita Osaka, Japan  
 SO Proceedings of SPIE-The International Society for Optical Engineering (1999), 3797(Organic Light-Emitting Materials and Devices III), 158-169  
 CODEN: PSISDG; ISSN: 0277-786X

PB SPIE-The International Society for Optical Engineering  
 DT Journal  
 LA English

AB Recent results on the creation of novel emitting amorphous mol. materials and fabrication of blue or multi-color emitting organic light-emitting diodes (OLEDs) are described. Tri(p-terphenyl-4-yl)amine functions not only as a blue-emitting material with hole-transporting properties but also as a good host matrix for fluorescent dopants such as perylene. 5,5'-Bis(dimethylsilyl)-2,2'-bithiophene (BMB-2T) and bis[4-(bis(4-methylphenyl)amino)phenyl]-a-oligothiophene (BMA-nT (n is 1 to .apprx.4)) are a good blue-emitting amorphous mol. material with electron-transporting properties and good multi-color emitting amorphous mol. materials with hole-transporting properties, resp. for OLEDs. Exciplex formation at the organic solid interface between the hole- and electron-transporting materials and its potential application for color tuning are also described.

IT 145693-79-4  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)  
 (organic light-emitting diodes using novel emitting amorphous mol. materials)

RN 145693-79-4 CAPLUS  
 CN [1,1':4,4''-Terphenyl]-4-amine, N,N-bis([1,1':4,4''-terphenyl]-4-yl)-(9CI) (CA INDEX NAME)

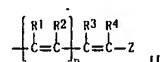
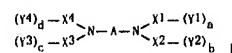


RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 58 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2000:457176 CAPLUS  
 DN 133:81385  
 TI Organic electroluminescent devices  
 IN Hosokawa, Chishio; Funehashi, Masakazu; Kawamura, Hisayuki; Arai, Hiromasa; Koga, Hidetoshi; Ikeda, Hidetsugu  
 PA Idemitsu Kosun Co., Ltd., Japan  
 SO PCT Int. Appl., 167 pp.  
 CODEN: PIAXD2

DT Patent  
 LA Japanese

PAT. NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000039247	A1	20000706	WO 1999-JP7390	19991228 <--
W: CN, KR, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
JP 2001052868	A	20010223	JP 1999-223056	19990805 <--
JP 2001131541	A	20010515	JP 1999-347848	19991207 <--
EP 1061112	A1	20001220	EP 1999-961465	19991228 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
CN 1721499	A	20060118	CN 2005-10084528	19991228
EP 1666561	A1	20060607	EP 2006-110875	19991228
R: DE, FR, GB				
EP 1775335	A2	20070418	EP 2007-100259	19991228
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU				
US 6743948	B1	20040601	US 2000-623057	20000825
US 2003072966	A1	20030417	US 2002-179179	20020626 <--
US 6951693	B2	20051004		
US 2005038296	A1	20050217	US 2004-814121	20040401
US 2006189828	A1	20060824	US 2006-344604	20060201
US 2007142671	A1	20070621	US 2007-624255	20070118
PR1 JP 1998-373921	A	19981228		
JP 1999-140103	A	19990520		
JP 1999-223056	A	19990805		
JP 1999-234652	A	19990820		
JP 1999-347848	A	19991207		
CN 1999-803419	A3	19991228		
EP 1999-961465	A3	19991228		
WO 1999-JP7390	W	19991228		
US 2000-623057	A3	20000825		
US 2004-814121	B1	20040401		
US 2006-344604	B1	20060201		
OS MARPAT 133:81385				
GI				



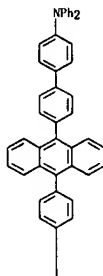
L5 ANSWER 58 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

AB The devices having a high luminescent efficiency, a long life and a high heat resistance comprise I (A = (substituted) C22-60 arylene; X1-4 = (substituted) C6-30 arylene; Y1-4 = H; a-d = 0-2; R1-4 = H, (substituted) alkyl, (substituted) aryl, cyano; R3 may be bonded to R4 to form a triple bond; Z = (substituted) aryl; n = 0, 1).

IT 279672-13-8 279672-15-0 279672-17-2  
 279672-19-4 279672-20-7 279672-47-8  
 279672-48-9

RL: DEV (Device component use); USES (Uses)  
 (organic electroluminescent devices)

RN 279672-13-8 CAPLUS  
 CN [1,1'-Biphenyl]-4-amine, 4',4''-(9,10-anthracenediyl)bis[N,N-diphenyl]- (9CI) (CA INDEX NAME)



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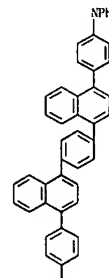


PAGE 2-A

RN 279672-15-0 CAPLUS  
 CN Benzenamine, 4,4'-(1,4-phenylenedi-4,1-naphthalenediyl)bis[N,N-diphenyl]- (9CI) (CA INDEX NAME)

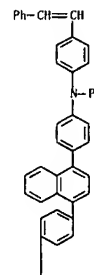
L5 ANSWER 58 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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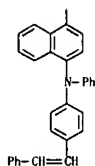
RN 279672-17-2 CAPLUS  
 CN 1-Naphthalenamine, N-phenyl-N-[4-(2-phenylethenyl)phenyl]-4-[4-[4-(phenyl[4-(2-phenylethenyl)phenyl]amino)phenyl]-1-naphthalenyl]phenyl]- (9CI) (CA INDEX NAME)



PAGE 1-A

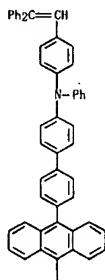
L5 ANSWER 58 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 2-A



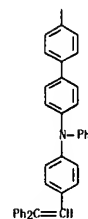
RN 279672-19-4 CAPLUS  
 CN [1,1'-Biphenyl]-4-amine, 4',4'''-(9,10-anthracenediyl)bis[N-(4-(2,2-diphenylethenyl)phenyl)-N-phenyl]- (9CI) (CA INDEX NAME)

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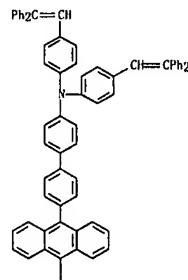
L5 ANSWER 58 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 2-A



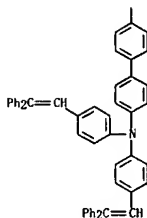
RN 279672-20-7 CAPLUS  
 CN [1,1'-Biphenyl]-4-amine, 4',4'''-(9,10-anthracenediyl)bis[N,N-bis(4-(2,2-diphenylethenyl)phenyl)- (9CI) (CA INDEX NAME)

PAGE 1-A



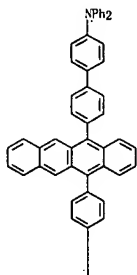
L5 ANSWER 58 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 2-A



RN 279672-47-8 CAPLUS  
 CN [1,1'-Biphenyl]-4-amine, 4',4'''-(5,12-naphthacenediyl)bis[N,N-diphenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



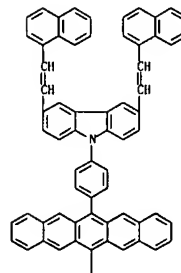
PAGE 2-A



RN 279672-48-9 CAPLUS  
 CN Benzenamine, 4-[[13-[4-[3,6-bis[2-(1-naphthalenyl)ethenyl]-9H-carbazol-9-yl]phenyl]-6-pentacenyl]-N,N-diphenyl]- (9CI) (CA INDEX NAME)

L5 ANSWER 58 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 59 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1999:783350 CAPLUS

DN 132:29694

TI Manufacture of surface-conducting type electron-emitting device, and image-forming device and its fabrication

IN Iwaki, Takashi

PA Canon K. K. Japan

SO Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 11339640	A	19991210	JP 1998-145870	19980527 <-
PRAI JP 1998-145870		19980527		

AB The electron-emitting device comprising an elec. conductive thin formed between a pair of electrodes, and an electron-emitting part at a part of the conductive thin film is manufactured by (1) forming a multilayered organic film containing a polyimide on the electron-emitting part, and (2) applying a voltage onto the electrodes to carbonize the organic film. An image-forming apparatus comprises a power source containing multiple electron-emitting devices above claimed, a light-emitting substance, and a driving circuit. In fabrication of the image-forming apparatus, the electron-emitting device is also manufactured by the claimed method. Each electron-emitting device shows uniform and stable electron emitting properties.

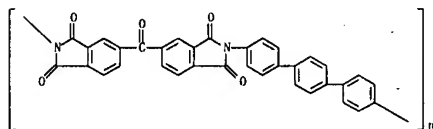
IT 83932-46-IP. Benzophenonetetracarboxylic anhydride-1,4-bis(4-aminophenyl)benzene copolymer, sru

RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(formation and imidation of: manufacture of surface-conducting type electron-emitting device containing carbon as emitter formed by carbonization of polyimides and image-forming device)

RN 83932-46-1 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)][1,1':4',1''-terphenyl]-4,4'-diyl] (9C1) (CA INDEX NAME)



L5 ANSWER 60 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1999:756830 CAPLUS

DN 132:7426

TI Multilayer organic electroluminescent devices using carbazole derivatives and their manufacture

IN Nakaya, Tadao; Yamauchi, Takao; Konishi, Takamori

PA Taiho Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 32 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 11329737	A	19991130	JP 1998-260328	19980914 <-
PRAI JP 1998-63370	A	19980313		

AB The devices have hole-transporting layers containing compds. having 9-carbazolyl groups. Preparation methods of the carbazole derivs. by using (A) biphenyl, (B) 4,4'-diiodobiphenyl, (C) 4-iodoaniline, (D) carbazole, or (E) 4-iodoacetophenone as starting materials are claimed. The devices show improved lifetime and high luminance.

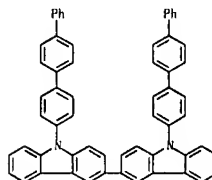
IT 251316-80-OP

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(manufacture of carbazole derivs. for hole-transporting layers of multilayer electroluminescent devices)

RN 251316-80-0 CAPLUS

CN 3,3'-Bi-9H-carbazole, 9,9'-bis([1,1':4',1''-terphenyl]-4-yl)- (9C1) (CA INDEX NAME)



L5 ANSWER 61 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1999:674555 CAPLUS

DN 132:64589

TI Soluble, UV-fluorescent polyamides and polyimides containing oligophenyls in the main chain and highly phenylated side groups

AU Mikroyannidis, John A.

CS Chemical Technology Lab., Dep. Chemistry, Univ. Patras, Patras, 26500, Greece

SD Macromolecular Chemistry and Physics (1999), 200(10), 2327-2337

CODEN: MCHMPS; ISSN: 1022-1352

PB Wiley-VCH Verlag GmbH

DT Journal

LA English

AB Starting from pyrrylus salts 4 new aromatic diamines were synthesized and used for the preparation of rigid-rod polyamides and polyimides. The polymers contain p-terphenyl or p-quinquephenyl moieties in the backbone and pendent groups, which consist of 1,3,5-triphenylbenzene or triphenylmethane segments. Most of the polymers show excellent solubility in various common solvents and even in 1,1,2,2-tetrachloroethane. Polyamides with pendent groups of triphenylmethane possess enhanced hydrophilicity. The solns. of all polymers in DMF show UV-fluorescence with emission maxima in the range of 350-367 nm. The polymers are amorphous and their Tg. values range from 250-310°. They display an outstanding thermal stability, i.e., are stable up to 366-411° and afford char yields of 64-81% at 800° in N2.

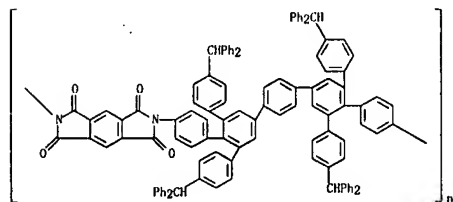
IT 252977-11-OP 252977-13-2P

RL: FRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(preparation and properties of soluble UV-fluorescent polyamides and polyimides containing oligophenyl main and phenylated side groups)

RN 252977-11-0 CAPLUS

CN Poly[(5,7-dihydro-1,3,5,7-tetraoxabenzol[1,2-c:4,5-c']dipyrrole-2,6(1H,3H)-diyl)[2,2':3',3''-5'',6'-tetraakis[4-(diphenylmethoxy)phenyl][1,1':4',1''-4'',1':4',1''-quinquephenyl]-4,4''-diyl]] (9C1) (CA INDEX NAME)

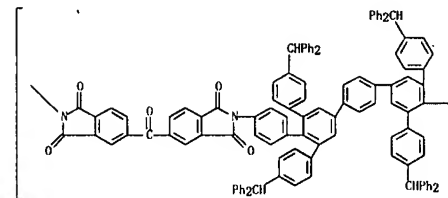


RN 252977-13-2 CAPLUS

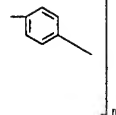
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)][2,2':3',3''-5'',6'-tetraakis[4-(diphenylmethoxy)phenyl][1,1':4',1''-4'',1':4',1''-quinquephenyl]-4,4''-diyl]] (9C1) (CA INDEX NAME)

L5 ANSWER 61 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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PAGE 1-B



RE. CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT



L5 ANSWER 62 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1999:670514 CAPLUS

DN 132:12856

TI New Polyimides for Gas Separation. 1. Polyimides Derived from Substituted Terphenylenes and 4,4'-(Hexafluoroisopropylidene)diphthalic Anhydride

AU Al-Masri, Majdi; Kricheldorf, Hans R.; Fritsch, Detlev

CS GKSS Forschungszentrum GmbH, Geesthacht, D-21502, Germany

SO Macromolecules (1999), 32(23), 7853-7858

CODEN: MAMORX; ISSN: 0024-9297

PB American Chemical Society

DT Journal

LA English

AB Five new methyl-substituted diamino-terphenyls were prepared by Pd-catalyzed coupling of bisboronic acids and bromoarenes. The Me groups are introduced to hinder rotations around the aromatic rings and to create a large free volume. These diamines were polycondensed with 4,4'-(hexafluoroisopropylidene)diphthalic anhydride (6FDA), and the imidization of the resulting polyamic acids was chemical completed by treating with Ac2O and Et3N. The permeabilities and apparent diffusion coeffs. of the pure gases He, H2, N2, O2, CO2, and CH4 were measured in a time-lag apparatus at feed pressures below 1 bar. Apparent solubility coeffs. and some selectivities for gases were calculated, and these data were discussed in the light of polyimides with comparable structures.

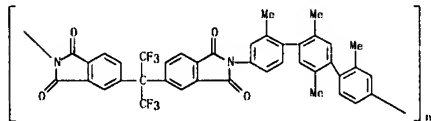
IT 251480-48-5P 251480-49-6P 251480-50-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(polyimides derived from substituted terphenylenes and (hexafluoroisopropylidene)diphthalic anhydride for gas separation)

RN 251480-48-5 CAPLUS

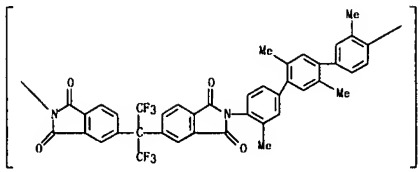
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene](1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)(2,2',2'',5',5''-tetramethyl[1,1':4',1''-terphenyl]-4,4''-diyl)] (9C1) (CA INDEX NAME)



RN 251480-49-6 CAPLUS

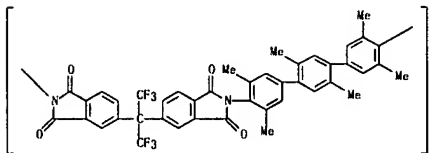
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene](1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)(2,2',3,3',5,5''-tetramethyl[1,1':4',1''-terphenyl]-4,4''-diyl)] (9C1) (CA INDEX NAME)

L5 ANSWER 62 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 251480-50-9 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene](1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)(2,2',3,3',5,5''-tetramethyl[1,1':4',1''-terphenyl]-4,4''-diyl)] (9C1) (CA INDEX NAME)



HE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 63 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1999:638516 CAPLUS

DN 131:250224

TI Organic electroluminescent material for electroluminescent device

IN Tamano, Michiko; Okutsu, Satoshi; Onikubo, Shunichi; Maki, Shinichiro;

Enokida, Toshio

PA Toyo Ink Mfg. Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

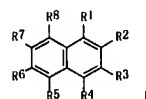
CODEN: JKKXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 JP 11273860	A	19991008	JP 1998-73762	19980323 <-
PRA1 JP 1998-73762		19980323		
OS WARPAT 131:250224				
GI				



AB An organic electroluminescent material, suited for use in making a stable electroluminescent device, is aminonaphthalene derivs. represented by I (R1-8 = H, halo, alkyl, alkoxy, aryloxy, alkylthio, aryl, and -NR9R10 (R9, R10 = alkyl) or aryl group; may be linked together);  $\geq 2$  groups of R1-8 are -NR9R10).

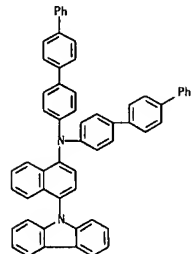
IT 244280-96-4

RL: DEV (Device component use); USBS (Uses)

(organic electroluminescent material for electroluminescent device)

RN 244280-96-4 CAPLUS

CN 1-Naphthalenamine, 4-(9H-carbazol-9-yl)-N,N-bis([1,1':4',1''-terphenyl]-4-yl)- (9C1) (CA INDEX NAME)



L5 ANSWER 63 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

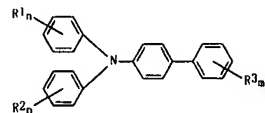
L5 ANSWER 64 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1999:427030 CAPLUS

DN 131:108877  
T1 Electrophotographic photoreceptor containing biphenyl compound and process cartridge and electrophotographic apparatus containing it  
IN Kanamaru, Tetsuo; Kikuchi, Norihiro; Nakata, Koichi  
PA Canon K. K., Japan; Canon Inc.  
SO Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JXXXXF

DT Patent  
LA Japanese

FAN CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1	JP 11184108	A	19990709	JP 1997-357631	19971225 <--
	JP 3689546	B2	20050831		
PRA1	JP 1997-357631		19971225		
OS	WARPAT 131:108877				
GI					



AB The photoreceptor has a photosensitive layer containing a biphenyl compound I [R1-3 = (substituted) alkyl, alkoxy, aryl; n, p, m = 0-2; n = p = m = 0] and a compound showing the maximum absorption wavelength 380-480 nm. The process cartridge, which is removable from an electrophotog. apparatus has 21 unit selected from the above photoreceptor, a charging means, a developing means, and a cleaning means. The electrophotog. apparatus has the above electrophotog. photoreceptor, a charging unit, an imagewise exposure unit, a development unit, and a transfer unit. The photoreceptor shows high sensitivity and improved durability in repeated use.

IT 130965-29-6

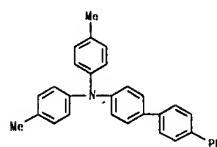
RL: DEV (Device component use): USES (Uses)

(charge-transporting agent: electrophotog. photoreceptor containing biphenyl derivative charge-transporting agent and orange-yellow pigment additive with sp. maximum absorption wavelength)

RN 130965-29-6 CAPLUS

CN [1,1':4',1''-Terphenyl]-4-amine, N,N-bis(4-methylphenyl)- (9C1) (CA INDEX NAME)

L5 ANSWER 64 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



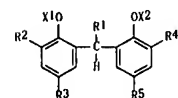
L5 ANSWER 65 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1999:344823 CAPLUS

DN 130:359253  
T1 Electrophotographic photosensitive member  
IN Sato, Kazuma; Miyazaki, Hajime; Ohmori, Hiroyuki; Nagasaka, Hideaki  
PA Canon Kabushiki Kaisha, Japan  
SO Eur. Pat. Appl., 59 pp.  
CODEN: EPXXDW

DT Patent  
LA English

FAN CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1	EP 918259	A2	19990526	EP 1998-402717	19981030 <--
	EP 918259	A3	19991013		
	EP 918259	B1	20041222		
	R: AT, RE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	SG 77657	A1	20010116	SG 1998-4276	19981026 <--
	CN 1218202	A	19990602	CN 1998-122654	19981030 <--
	JP 11202509	A	19990730	JP 1998-310566	19981030 <--
	JP 3768701	B2	20060419		
PRA1	JP 1997-314677	A	19971031		
	JP 1997-314678	A	19971031		
OS	WARPAT 130:359253				
GI					



AB An electrophotog. photosensitive member comprises a support and a photosensitive layer provided on the support. The photosensitive layer contains a compound which is represented by the formula I wherein R1 represents an alkyl group or an alkenyl group, R2-5 are the same or different and each represents a hydrogen atom, an alkyl group or an alkenyl group, and X1 and X2 are the same or different and each represents a hydrogen atom, an alkyl group, an alkenyl group or an acryloyl group, provided that X1 and X2 are not hydrogen atoms at the same time.

IT 130965-29-6

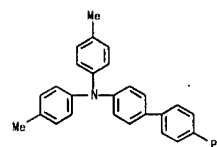
RL: DEV (Device component use): TEM (Technical or engineered material use): USES (Uses)

(electrophotog. photoreceptors with photosensitive layers containing)

RN 130965-29-6 CAPLUS

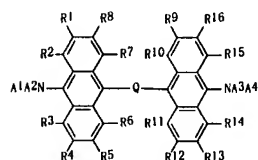
CN [1,1':4',1''-Terphenyl]-4-amine, N,N-bis(4-methylphenyl)- (9C1) (CA INDEX NAME)

L5 ANSWER 65 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



L5 ANSWER 66 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1999:260963 CAPLUS  
 DN 130:330444  
 TI Organic electroluminescent material containing anthracene derivative and organic electroluminescent device with it  
 IN Okutsu, Satoshi; Tamano, Michiko; Onikubo, Shunichi; Maki, Shinichiro; Enokida, Toshio  
 PA Toyo Ink Mfg. Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 28 pp.  
 CODEN: JXAXAF  
 DT Patent  
 LA Japanese  
 FAX CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 JP 11111460	A	19990423	JP 1997-271824	19971006 <--
JP 3633236	B2	20050330		
PRA1 JP 1997-271824		19971006		
OS WARPAT 130:330444				
GI				

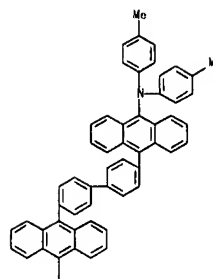


AB The material comprises an anthracene derivative having a formula I (A1-4 = alkyl, monocyclic group, condensed polycyclic; R1-16 = H, halogen, cyano, NO2, alkyl, alkoxy, aryloxy, alkylthio, arylthio, monocyclic group, condensed polycyclic, NH2; A1 and A2 and A3 and A4 may bond to form a ring; Q = divalent group). The device contains a pair of electrodes sandwiching a light-emitting layer-containing organic compound plural thin films containing the material. The device shows high luminance with efficiency and long life.

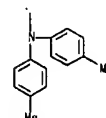
IT 223726-76-9  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (organic electroluminescent device containing anthracene derivative)  
 RN 223726-76-9 CAPLUS  
 CN 9-Anthracenamine, 10,10'-(1,1'-biphenyl)-4,4'-diylbis[N,N-bis(4-methylphenyl)-] (9CI) (CA INDEX NAME)

L5 ANSWER 66 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A



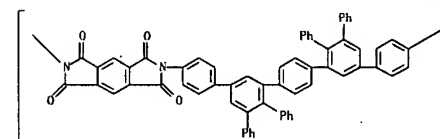
PAGE 2-A



L5 ANSWER 67 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1999:171515 CAPLUS  
 DN 130:282432  
 TI Wholly aromatic polyamides and polyimides prepared from 3,3'-di(4-aminophenyl)-5,5'-di(4-biphenyl)-p-terphenyl and 3,3'-di(4-aminophenyl)-5,5'-6,6'-tetraphenyl-p-terphenyl  
 AU Mikroyannidis, John A.  
 CS Chemical Technology Laboratory, Department of Chemistry, University of Patras, Patras, GR-26500, Greece  
 SO Polymer (1999), 40(11), 3107-3117  
 CODEN: POLMAG; ISSN: 0032-3861  
 PR Elsevier Science Ltd.  
 DT Journal  
 LA English  
 AR 3,3'-Bis(4-aminophenyl)-5,5'-bis(4-biphenyl)-p-terphenyl and 3,3'-bis(4-aminophenyl)-5,5'-6,6'-tetraphenyl-p-terphenyl as well as the corresponding acid chlorides were synthesized through pyridium salts. The polyamides and polyimides prepared from them were characterized by inherent viscosity, elemental analyses, FTIR, UV-visible, 1H-NMR, 13C-NMR, and X-ray diffraction spectroscopy, DSC, TMA, TGA, isothermal gravimetric anal., and moisture absorption. The polymers were amorphous and dissolved in polar aprotic solvents and CCl3CO2H. They did not melt and their Tg values ranged from 212 to 305° C. No weight loss was observed up to 357-386° C in air and the anaerobic char yields were 61-75% at 800° C.

IT 222958-46-5P 222958-48-7P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation of aromatic polyimides from terphenyl-based monomers)  
 RN 222958-46-5 CAPLUS  
 CN Poly[(5,7-dihydro-1,3,5,7-tetraoxabenzol[1,2-c:4,5-c']dipyrrole-2,6(1H,3H)-diyl)(4',5',5'',6''-tetraphenyl[1,1':3,1':4',1':5',1''-quinquephenyl]-4,4''-diyl)] (9CI) (CA INDEX NAME)

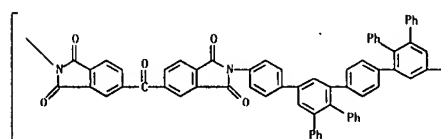
PAGE 1-A



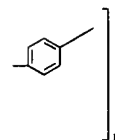
PAGE 1-B

L5 ANSWER 67 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
 RN 222958-48-7 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)(4',5',5'',6''-tetraphenyl[1,1':3,1':4',1':5',1''-quinquephenyl]-4,4''-diyl)] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

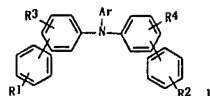


RE. CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 68 OF 201 CAPLUS COPYRIGHT 2007 ACS ON STN  
 AN 1999:157136 CAPLUS  
 DN 130:244425  
 TI Electrophotographic photoreceptor using specific two types of  
 charge-transporting materials  
 IN Kurimoto, Eiji; Umeda, Minoru; Ikegami, Takanaki; Sakon, Yota  
 PA Ricoh Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 384 pp.  
 COBEN: JXXXXF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11065140	A	19990305	JP 1997-239555	19970815
JP 1997-239555		19970815		

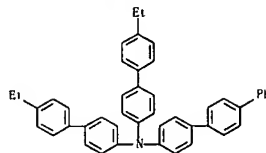
PI  
 PRAI  
 GI



AB The title photoreceptor comprises a conductive support coated with a photosensitive layer containing a compound 1 (R1, R2 = H, amino, (substituted) dialkylamino, alkoxy, thioalkoxy, aryloxy, (substituted) alkyl, halo, (substituted) aryl; R3, R4 = H, alkoxy, (substituted) alkyl, halo; Ar = (substituted) monocyclic aromatic hydrocarbon, (substituted) non-condensed polycyclic aromatic hydrocarbon, (substituted) heterocycle) and a compound [A(CH:CH)nCR:CH]2(CH2)m [1]; A = 9-anthryl, (substituted) N-substituted carbazoyl, N-substituted phenothiazyl, ArNR1R2 (Ar = (substituted) arylene; R1, R2 = (substituted) alkyl, (substituted) aralkyl, (substituted) aryl); R = H, (substituted) alkyl, (substituted) aralkyl, (substituted) aryl; m = 2-8; n = 0 or 1]. 22 Types of compds. may be used instead of 1 and 11. The photoreceptor shows high photosensitivity, stable charging properties, and improved durability in repeated use.

IT 221307-83-1  
 RL: DEV (device component use): USES (Uses)  
 (electrophotog. photoreceptor containing two-types of charge-transporting agents)  
 RN 221307-83-1 CAPLUS  
 CN [1,1':4,4'-terphenyl]-4-amine, N,N-bis(4'-ethyl[1,1'-biphenyl]-4-yl)- (9C1) (CA INDEX NAME)

L5 ANSWER 68 OF 201 CAPLUS COPYRIGHT 2007 ACS ON STN (Continued)



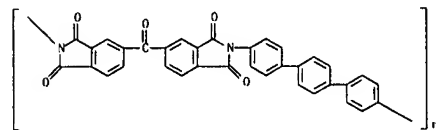
L5 ANSWER 69 OF 201 CAPLUS COPYRIGHT 2007 ACS ON STN  
 AN 1999:74519 CAPLUS  
 DN 130:160734  
 TI Process for manufacture of electron emitter and electron source for image  
 forming device  
 IN Iwaori, Takashi  
 PA Canon K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 25 pp.  
 COBEN: JXXXXF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11025850	A	19990129	JP 1997-174031	19970630
JP 1997-174031		19970630		

PI  
 PRAI

AB The process for manufacture of emitter, which has a conductive film and a polyimide film on a substrate, comprises the steps of: (1) forming a crevasse on the conductive film; (2) forming the polyamide acid layer on the crevasse; (3) converting the polyamide acid film to polyimide film by heating; and (4) charging near the crevasse by applying an elec. field to form an electron emitting part. The each electron emitters on an array shows same electron characteristics to form a high quality image.

IT 83932-46-1  
 RL: TEM (Technical or engineered material use): USES (Uses)  
 (process of manufacture of electron emitter and electron source for image forming device)  
 RN 83932-46-1 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[1,1':4,4'-terphenyl]-4,4'-diyl] (9C1) (CA INDEX NAME)



L5 ANSWER 70 OF 201 CAPLUS COPYRIGHT 2007 ACS ON STN  
 AN 1999:67390 CAPLUS  
 DN 130:210044  
 TI Synthesis and characterization of novel aromatic polyimides from  
 1,4-bis(4-aminophenyl)-2,3-diphenylnaphthalene and aromatic  
 tetracarboxylic dianhydrides  
 AU Morikawa, Atsushi; Hatakeyama, Tadashi  
 CS Department of Materials Science, Faculty of Engineering, Ibaraki  
 University, Ibaraki, 316-8511, Japan  
 SO Polymer Journal (Tokyo) (1999), 31(1), 76-78  
 COBEN: POLJBS; ISSN: 0032-3896  
 PB Society of Polymer Science, Japan  
 DT Journal  
 LA English  
 AB New aromatic polyimides containing a tetraphenylnaphthalene unit were synthesized from 1,4-bis(4-aminophenyl)-2,3-diphenylnaphthalene and 5 different aromatic tetracarboxylic dianhydrides by the conventional two-step procedure that included ring-opening polyaddn. in a polar amide-type solvent and subsequent thermal cyclic dehydration. These polyimides had inherent viscosities of 0.58-1.01 dl. g<sup>-1</sup> and some polyimides were readily soluble in a wide range of organic solvents such as N,N-dimethylacetamide, N-methyl-2-pyrrolidone, pyridine, and m-cresol on heating. The glass transition temperature of the polyimides ranged from 306 to 375° C, and 10% weight loss temps. were 540-580° C in air.  
 IT 220917-10-2P 220917-12-4P 220917-14-6P  
 220917-16-6P  
 RL: SPN (Synthetic preparation): PREP (Preparation)  
 (preparation of polyimides from bis(aminophenyl)diphenylnaphthalene and aromatic dianhydrides)  
 RN 220917-10-2 CAPLUS  
 CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)-1,4-phenylene(2,3-diphenyl-1,4-naphthalenediyl)-1,4-phenylene] (9C1) (CA INDEX NAME)

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

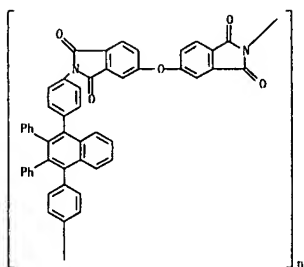
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

RN 220917-12-4 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene(2,3-diphenyl-1,4-naphthalenediyl)-1,4-phenylene] (9C1) (CA INDEX NAME)

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

RN 220917-14-6 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene(2,3-diphenyl-1,4-naphthalenediyl)-1,4-phenylene] (9C1) (CA INDEX NAME)

L5 ANSWER 70 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 220917-16-B CAPLUS  
CN Poly[(1,3-dihydro-1,3-dioxo-2H-indole-2,5-diyl)[2,2,2-trifluoro-1-(trifluoroethyl)ethylidene][1,3-dihydro-1,3-dioxo-2H-indole-5,2-diyl]-1,4-phenylene[2,3-diphenyl-1,4-naphthalenediyl]-1,4-phenylene] (9C1) (CA INDEX NAME)

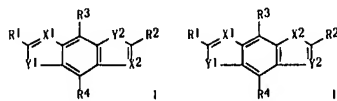
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*  
RE. CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 71 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1998:816752 CAPLUS  
DN 130:117124  
TI Organic electroluminescent materials and device with high luminance  
IN Okutsu, Satoshi; Tamano, Michiko; Onikubo, Shunichi; Ogawa, Tadashi; Enokida, Toshio  
PA Toyo Ink Mfg. Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 25 pp.  
CODEN: JKKXAF  
DT Patent  
LA Japanese  
FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10340786	A	19981222	JP 1997-150565	19970609 <--
JP 1997-150565		19970609		
WARPAT 130:117124				

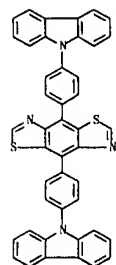


AB The materials comprise heterocyclic compds, which are described by the general formulas I or II (X1, X2 = N, CH; Y1, Y2 = S, O, N2; Z = H, halo, (substituted) alkyl, aryl, cycloalkyl, heterocyclic group; R1-R4 = H, cyano, NO2, (substituted) alkyl, aryl, alkoxy, aryloxy, alkylthio, arylthio, cycloalkyl, aryl, heterocyclic group, amino, alkylamino, or arylamino). Devices containing I are also claimed. The device showed high luminance and luminescent efficiency and long lifetime.

IT 219597-95-2  
RL: DEV (Device component use): USES (Uses)  
(heterocyclic compds. for electroluminescent devices)

RN 219597-95-2 CAPLUS  
CN 9H-Carbazole, 9,9'-(benzo[1,2-d:4,5-d']biathiazole-4,8-diylid-4,1-phenylene)bis- (9C1) (CA INDEX NAME)

L5 ANSWER 71 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



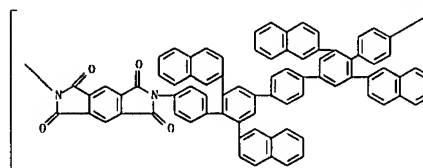
L5 ANSWER 72 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1998:796743 CAPLUS  
DN 130:125477  
TI Rigid-rod polyamides and polyimides prepared from 4,3'-diamino-2',6'-di(2-naphthyl)-p-terphenyl and 2',6',3',5'-tetra(2-naphthyl)-4,4'-diamino-p-quinquephenyl  
AU Mikroyannidis, John A.  
CS Chemical Technology Laboratory, Department of Chemistry, University of Patras, Patras, GR-26500, Greece  
SO Journal of Polymer Science, Part A: Polymer Chemistry (1999), 37(1), 15-24  
CODEN: JPACEC; ISSN: 0887-624X  
PB John Wiley & Sons, Inc.  
DT Journal  
LA English  
AB A series of rigid-rod polyamides and polyimides containing p-terphenyl or p-quinquephenyl moieties in backbone as well as naphthyl pendent groups were synthesized from two new aromatic diamines. The polymers were characterized by inherent viscosity, elemental anal., FT-IR, 1H-NMR, 13C-NMR, X-ray, differential scanning calorimetry (DSC), thermomech. anal. (TMA), thermal gravimetric anal. (TGA), isothermal gravimetric anal., and moisture absorption. All polymers were amorphous and displayed Tg values at 304-337° C. Polyamides dissolved upon heating in polar aprotic solvents containing LiCl as well as CCl3COOH, whereas polyimides were partially soluble in these solvents. No weight loss was observed up to 377-422° C in N2 and 355-397° C in air. The anaerobic char yields were 57-69% at 800° C.

IT 219834-75-OP 219834-77-2P  
RL: PEP (Physical, engineering or chemical process): PRP (Properties): SPN (Synthetic preparation): PREP (Preparation): PROC (Process)  
(preparation and characterization of rigid-rod polyamides and polyimides prepared from 4,3'-diamino-2',6'-di(2-naphthyl)-p-terphenyl and 2',6',3',5'-tetra(2-naphthyl)-4,4'-diamino-p-quinquephenyl)

RN 219834-75-0 CAPLUS  
CN Poly[(5,7-dihydro-1,3,5,7-tetraoxabenz[1,2-c:4,5-c']dipyrrole-2,6,11,3H)-diyl](2',3',5',6'-tetra-2-naphthalenyl)[1,1':4',1'':4'',1''':4''',1''''-quinquephenyl]-4,4'-diyl] (9C1) (CA INDEX NAME)

PAGE 1-A



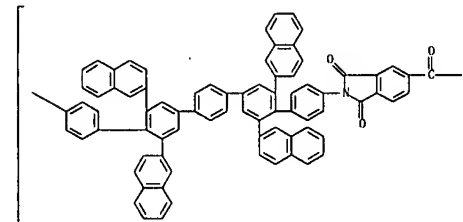
L5 ANSWER 72 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-B



RN 219834-77-2 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)(2,3',5',6'-tetra-2-naphthalenyl[1,1':4',1'':4'',1''':4''',1''':5'',1''':5''-quinquephenyl]-4,4''''-diyl)] (9CI) (CA INDEX NAME)

PAGE 1-A



L5 ANSWER 73 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1998:711425 CAPLUS

DN 130:39074

TI Charge carrier transport in polyimides based on 9,10-bis(p-aminophenyl)anthracene

AU Tameev, Alek R.; Kozlov, Aleksey A.; Vannikov, Anatoly V.; Lunina, Elena V.; Berendyanov, Vladimir I.; Kotov, Boris V.

CS A. N. Frumkin Institute of Electrochemistry of the Russian Academy of Sciences, Moscow, 117071, Russia

SD Polymer International (1998), 47(2), 198-202

CODEN: PLYIF1; ISSN: 0959-8103

PB John Wiley &amp; Sons Ltd.

DT Journal

LA English

AB Transient currents were measured by the time-of-flight technique in films of aromatic polyimides based on 9,10-bis(p-aminophenyl)anthracene and a series of diimide fragments. The elec. field and temperature dependences of the hole and electron drift mobilities were detected. In amorphous films of the soluble polyimide with a phthalide group in the diimide fragment, the drift mobility was found to reach the value of  $10^{-4}$  cm<sup>2</sup> V<sup>-1</sup> s<sup>-1</sup> at  $5.5 \times 10^5$  V cm<sup>-1</sup> and 291 K. In the insol. polyimide films including the crystalline phase, the mobility was lower by one or two orders of magnitude. This is attributed to the presence of cavities in the films of the insol. polyimides. The applicability of known theor. models describing temperature and elec. field dependences of the drift mobility is discussed.

IT 106725-35-3 106725-36-4 133030-08-7

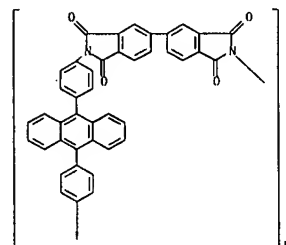
168026-63-9 202343-27-9

RI: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)

(charge carrier transport in polyimides based on 9,10-bis(p-aminophenyl)anthracene)

RN 106725-35-3 CAPLUS

CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9CI) (CA INDEX NAME)

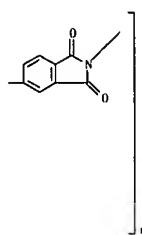


RN 106725-36-4 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9CI) (CA INDEX NAME)

L5 ANSWER 72 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-B



RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

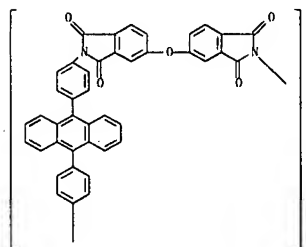
L5 ANSWER 73 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

RN 133030-08-7 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9CI) (CA INDEX NAME)



RN 168026-63-9 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)(3-oxo-1(3H)-isobenzofuran-1-ylidene)(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9CI) (CA INDEX NAME)

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

RN 202343-27-9 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)sulfonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9CI) (CA INDEX NAME)

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 74 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1998:614437 CAPLUS  
 DN 129:295965  
 TI Organic electroluminescent device with high luminance and polycyclic phosphorescent compound thereof  
 IN Onikubo, Shunichi; Tanano, Michiko; Okutsu, Satoshi; Enokida, Toshio  
 PA Toyo Ink Mfg. Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 59 pp.  
 CODEN: JKKXAF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 10251633	A	19980922	JP 1997-62568	19970317 <--
JP 3503403	B2	20040308		
EP 866110	A1	19980923	EP 1998-301986	19980317 <--
EP 866110	B1	20041020		
R: AT, BE, CH, DE, DK, ES, FR, GR, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
EP 934992	A1	19990811	EP 1999-106698	19980317 <--
EP 934992	B1	20040721		
R: DE, FR, GB				
US 6280859	B1	20010828	US 1998-42569	19980317 <--
US 2001033944	A1	20011025		
PRAI JP 1997-62568	A	19970317		
EP 1998-301986	A3	19980317		
OS MARPAT 129:295965				
GI				

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

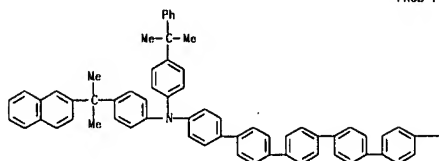
AB The claimed compound is I [A = aromatic (condensed) ring, (condensed) heterocycle excluding Q1 (E = H or linkage), bivalent group comprising 22 kinds of 2-10 above ring systems which are connected directly or via O, N, S, Cl-20 chain, nonarom. cycle, where the case of A = Q3 is excluded; Ar1-4 = (condensed) aromatic group; X1-4 = O, S, CO, SO2, CxH2xOCyH2y (x, y = 0-20; x + y = 0), C2-20 alkyl(id)ene, bivalent alicyclic group; R1-20 = H, halo, alkyl (oxy), aromatic ring, aromatic heterocycle, amino]. Also claimed is an organic electroluminescent device containing I with high luminance and good stability in repeated uses.

IT 213969-20-1  
 RL: DEV (Device component use): TEM (Technical or engineered material use): USES (Uses)  
 (luminescent material: organic electroluminescent device containing polycyclic phosphorescent compound with high luminance)

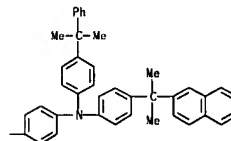
RN 213969-20-1, CAPLUS  
 CN [1,1':4',1''-4'',1'''-4''',1''''-4''''-Sesiphenyl]-4,4''''-diamino, N,N'-bis[4-[1-methyl-1-(2-naphthalenyl)ethyl]phenyl]-N,N'-bis[4-(1-methyl-1-phenylethyl)phenyl]- (9CI) (CA INDEX NAME)

L5 ANSWER 74 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A



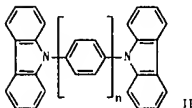
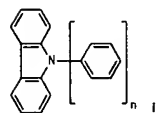
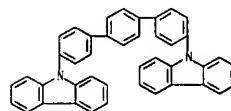
PAGE 1-B



L5 ANSWER 75 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1998:402869 CAPLUS  
 DN 129:73856  
 TI Phenylcarbazole derivative used as hole- or electron-transporting layer in organic light-emitting device  
 IN Nakaya, Taduo; Wang, An Bong; Kajikawa, Fujio  
 PA Sanyo Shinku Kogyo K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKKXAF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 10168443	A	19980623	JP 1996-336653	19961217 <--
PRAI JP 1996-336653		19961217		
OS MARPAT 129:73856				
GI				

L5 ANSWER 75 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



AB The phenylcarbazole derivative comprises several units of I or II (n ≥ 2). These mole., which can be easily prepared, have flat resonance stabilization structures so that lone pair electrons in N are easily transferred.

IT 208838-20-4P  
 RL: DEV (Device component use): IMP (Industrial manufacture): TEM (Technical or engineered material use): PREP (Preparation): USES (Uses)  
 (phenylcarbazole derivative used as hole- or electron-transporting layer in organic light-emitting device)

RN 208838-20-4, CAPLUS  
 CN 9H-Carbazole, 9,9'-[1,1':4',1''-terphenyl]-4,4''-diylbis- (9CI) (CA INDEX NAME)

L5 ANSWER 76 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1998:397810 CAPLUS  
 DN 129:68171  
 TI Manufacture of polypyridinium salts useful as electric conductors  
 IN Harris, Frank; Chuang, Chun Hua K.  
 PA University of Akron, USA  
 SO U.S., 15 pp., Cont.-in-part of U. S. Ser. No. 967,246, abandoned.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5763563	A	19980609	US 1994-296807	19940819 <--
US 5863651	A	19990126	US 1996-90012	19980603 <--
PRAI US 1989-402126	B2	19890901		
US 1991-703159	B2	19910520		
US 1992-967246	B2	19921027		
US 1994-296807	A1	19940819		

AB A new class of pyrylium salts and process for the manufacture, as well as the use of the new pyrylium salts as polycondensation components for a new class of polypyridinium salts and a new class of conducting polypyridinium salts manufactured by doping the polypyridinium salts with a conducting dopant is described. The new polypyridinium salts and their conducting doped analogs according to this invention are stable pos. charged polymers resistant to base attack and are distinguished by water insolv., making them ideally suited as a metal anti-corrosion coating, stable in basic media making them ideally suited for separation membranes for anions, and as excellent, thermally and chemical stable conducting polymers when doped ideally suited for making elec. conducting materials and as redox catalysts. A polymer was prepared by polymerization of 1,4-phenylenediamine and 4,4'-p-phenylene-bis(2,6-diphenylpyrylium)ditetrafluoroborate.

IT 122538-91-4P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (manufacture of polypyridinium salts useful as elec. conductors)

RN 122538-91-4 CAPLUS

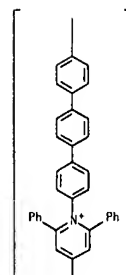
CN Poly[(2,6-diphenylpyridinium-1,4-diyl)-1,4-phenylene(2,6-diphenylpyridinium-4,1-diyl)[1,1':4,4'-(terphenyl)-4,4'-diyl bis[tetrafluoroborate(i-)] (9CI) (CA INDEX NAME)]

CM 1

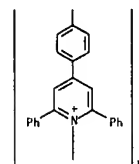
CRN 122538-90-3  
 CMF (CS8 H40 N2)n  
 CCI PMS

L5 ANSWER 76 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A



PAGE 2-A



CM 2

CRN 14874-70-5  
 CMF B F4  
 CCI CCS

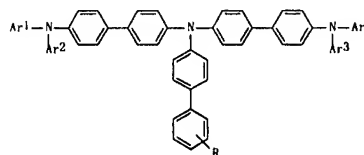


RE, CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 76 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

L5 ANSWER 77 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1998:184308 CAPLUS  
 DN 128:250507  
 TI Triamine compound charge-transporting material for organic electroluminescent device  
 IN Kawamura, Hisayuki; Nakamura, Hiroaki; Hosokawa, Chishio  
 PA Idemitsu Kosan Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 24 pp.  
 CODEN: JXXXXF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 10077252	A	19980324	JP 1996-235367	19960905 <--
JP 3880104	B2	20070214		
PRAI JP 1996-235367		19960905		
OS MARPAT 128:250507				
GI				



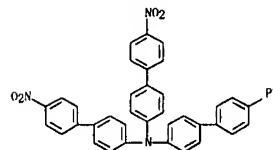
1

AB The triamine compound comprises 1 [Ar1-4 = (substituted) aryl with 6-18 nuclear C atoms; R = H, C1-6 alkyl or alkoxy, C6-14 aryl]. The triamine compound is also useful for electrophotog. photoreceptors. An electroluminescent device using the triamine compound shows good luminescent stability under continuous operation and high heat resistance.

IT 204769-98-2P 204769-99-3P 204770-00-3P  
 RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (triamine compound charge-transporting material for organic electroluminescent device)

RN 204769-98-2 CAPLUS

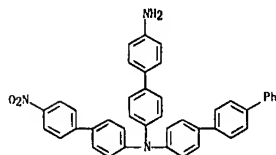
CN [1,1':4,4'-(terphenyl)-4-amine, N,N-bis(4'-nitro[1,1'-biphenyl]-4-yl)- (9CI) (CA INDEX NAME)]



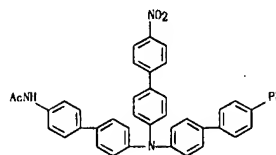
RN 204769-99-3 CAPLUS



L5 ANSWER 77 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
 CN [1,1'-Biphenyl]-4,4'-diamine, N-(4'-nitro[1,1'-biphenyl]-4-yl)-N-[1,1':4',1''-terphenyl]-4-yl- (9C1) (CA INDEX NAME)

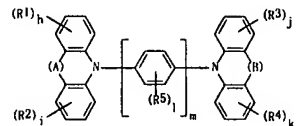


RN 204770-00-3 CAPLUS  
 CN Acetamide, N-[4'-[(4'-nitro[1,1'-biphenyl]-4-yl)[1,1':4',1''-terphenyl]-4-ylamino][1,1'-biphenyl]-4-yl]- (9C1) (CA INDEX NAME)



L5 ANSWER 78 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1998:143382 CAPLUS  
 DN 128:217297  
 TI Preparation of aromatic tertiary amines having benzazepine structures  
 IN Sato, Tadahisa  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 15 pp.  
 CUDEN: JKKXAF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

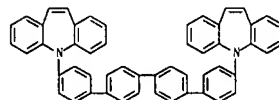
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1	JP 10059943	A	19980303	JP 1996-235787	19960820 <--
	JP 3798080	R2	20060719		
	US 5929235		19990727	US 1997-914248	19970819 <--
PRA1	JP 1996-235787	A	19960820		
OS	MARPAT 128:217297				
G1					



AB Title compds. 1 [A, B = (substituted) vinylene, o-arylene; R1-R4 = halo, (substituted) alkyl, aryl, alkoxy, aryloxy, dialkylamino, N-alkyl-N-arylamino, diarylamino; R5 = halo, (substituted) alkyl, alkoxy, dialkylamino; h=1 or 4; m=1-6; if m ≠ 2, then R51 may be different in each benzene ring], useful as electrophotog. and electroluminescent materials (no data), are prepared 5H-dibenz[b,f]azepine was treated with 4,4'-diiodobiphenyl in the presence of KOH and Cu in decalin at 200° for 28 h to give 9% 1 (A = B = vinylene, R1-R5 = absent; h=1 or 4, m = 2).

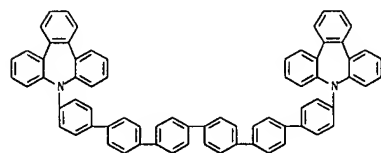
IT 204200-12-4P 204200-13-5P  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (preparation of phenylenebis(dibenzazepines))

RN 204200-12-4 CAPLUS  
 CN 5H-Dibenz[b,f]azepine, 5,5'-[1,1':4',1''-4',1''-quaterphenyl]-4,4''-diylbis- (9C1) (CA INDEX NAME)



L5 ANSWER 78 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 204200-13-5 CAPLUS  
 CN 9H-Tribenz[b,d,f]azepine, 9,9'-[1,1':4',1''-4',1''-quaterphenyl]-4,4''-diylbis- (9C1) (CA INDEX NAME)



L5 ANSWER 79 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1998:118147 CAPLUS  
 DN 128:230924

TI Electroluminescence of anthracene-containing polyimides  
 AU Mal'tsev, Evgenii I.; Brusentseva, Maria A.; Berendyaev, Vladimir I.; Kolesnikov, Vladimir A.; Lunina, Elena V.; Kotov, Boris V.; Vannikov, Anatolii V.

CS A N Frankin Institute of Electro-Chemistry, Russian Academy of Sciences, Moscow, 117071, Russia

SO Mendeleev Communications (1998), (1), 31-32

CODEN: MENCX; ISSN: 0959-9436

PB Russian Academy of Sciences

DT Journal

LA English

AB Electroluminescence has been revealed in a new class of electroactive polymers, the anthracene-containing aromatic polyimide deriva.; high thermal stability, ability to cast layers from solution and excellent film-forming properties make these materials of potential interest for technol. applications.

IT 168026-63-9

RL: PRP (Properties)  
 (electroluminescence of anthracene-containing polyimides)

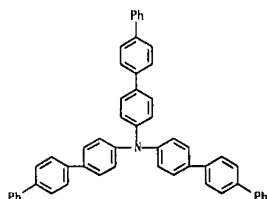
RN 168026-63-9 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)(3-oxo-1(3H)-isobenzofuran-5-ylidene)(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

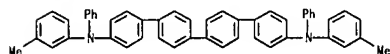
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*  
 RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 80 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1998:90685 CAPLUS  
 DN 128:186304  
 T1 Organic light-emitting diodes using novel charge-transport materials  
 AU Shiota, Yasuhiko  
 CS Department Applied Chemistry, Faculty Engineering, Osaka University, Suita, Osaka, 565, Japan  
 SO Proceedings of SPIE-The International Society for Optical Engineering (1997), 3148(Organic Light-Emitting Materials and Devices), 186-193  
 CODEN: PSISDG; ISSN: 0277-786X  
 PB SPIE-The International Society for Optical Engineering  
 DT Journal  
 LA English  
 AB Several novel families of amorphous mol. materials with high glass-transition temps. (T<sub>g</sub>) that function as charge-transport or emitting materials for organic LEDs were designed and synthesized. Double-layer and multilayer devices using these novel amorphous mol. materials were fabricated and their performances studied. The use of the novel amorphous mol. materials with high T<sub>g</sub>s enabled the fabrication of thermally stable organic LEDs: one of the devices was found to operate even at 170°. The multilayer device consisting of double hole-transport layers and an emitting layer was found to enhance significantly the durability of the device. Exciplex formation at the organic/organic solid interface in organic LEDs also was studied.  
 IT 145693-79-4  
 RL: DEV (Device component use); USES (Uses)  
 (Organic light-emitting diodes using novel charge-transport materials)  
 RN 145693-79-4 CAPLUS  
 CN [1,1':4',1''-Terphenyl]-4-amine, N,N-bis([1,1':4',1''-terphenyl]-4-yl)-(9CI) (CA INDEX NAME)



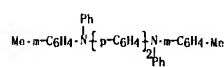
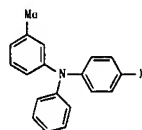
RE, CNT 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 81 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



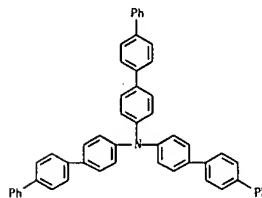
L5 ANSWER 81 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1998:59336 CAPLUS  
 DN 128:127812  
 T1 Preparation of aromatic tertiary amines and their intermediates as materials for organic electroluminescent, electrophotographic, and optical recording materials  
 IN Sato, Tadahisa  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 44 pp.  
 CODEN: JXXXXF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 JP 10017531	A	19980120	JP 1996-176226	19960705 <--
PRA1 JP 1996-176226		19960705		
OS CASREACT 128:127812; MARPAT 128:127812				
G1				



AB Comps. having ≥2 aromatic tertiary amines and ≥1 arom hydrocarbon ring assemblies are prepared by cross-coupling of C in aromatic groups using Pd catalysts. Iodide I (X = iodo) (preparation given) was treated with aromatic boronic acid I [X = B(OH)<sub>2</sub>] (preparation given) in the presence of (AcO)<sub>2</sub>Pd, (2-MeC<sub>6</sub>H<sub>4</sub>)<sub>3</sub>P and Et<sub>3</sub>N in DMF at 100° for 2 h to give 75% aromatic tertiary amine II.  
 IT 119429-17-3P  
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of aromatic tertiary amines by cross-coupling of iodo aromatic amines with aromatic boronic acids using Pd catalysts)  
 RN 119429-17-3 CAPLUS  
 CN [1,1':4',1''-Quaterphenyl]-4,4'''-diamine, N,N'-bis(3-methylphenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)

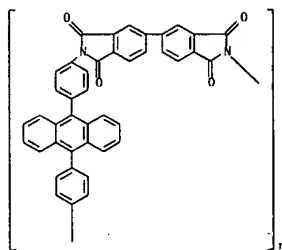
L5 ANSWER 82 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1998:57739 CAPLUS  
 DN 128:198154  
 T1 Tri(p-terphenyl-4-yl)amine as a novel blue-emitting material for organic electroluminescent devices  
 AU Ogawa, Hiromitsu; Ohnishi, Katsuhiko; Shiota, Yasuhiko  
 CS Suita, Yamadaoka, Faculty of Engineering, Department of Applied Chemistry, Osaka University, Osaka, 565, Japan  
 SO Synthetic Metals (1997), 91(1-3), 243-245  
 CODEN: SYMEBZ; ISSN: 0379-6779  
 PB Elsevier Science S.A.  
 DT Journal  
 LA English  
 AB A novel amorphous mol. material, tri(p-terphenyl-4-yl)amine (p-TTA), was found to function as a morphol. and thermally stable blue-emitting material for organic electroluminescent (EL) devices. A double-layer EL device consisting of an emitting layer of p-TTA and a hole-transport layer of 1,3,5-tris[N-(4-diphenylaminophenyl)phenyl]aminobenzene sandwiched between an alloy of Mg and Ag (apprx.10:1) and In-Sn-oxide (ITO) electrodes emitted bright blue light resulting from p-TTA. The EL device exhibited a maximum luminance of apprx.350 cd m<sup>-2</sup> at a driving voltage of 13 V. The external quantum efficiency is 0.4.  
 IT 145693-79-4  
 RL: DEV (Device component use); PRP (Properties); USES (Uses)  
 (tri(p-terphenyl-4-yl)amine as a novel blue-emitting material for organic electroluminescent devices)  
 RN 145693-79-4 CAPLUS  
 CN [1,1':4',1''-Terphenyl]-4-amine, N,N-bis([1,1':4',1''-terphenyl]-4-yl)-(9CI) (CA INDEX NAME)



RE, CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

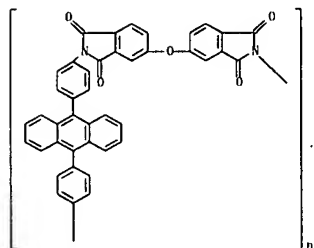
IT	106725-35-3	106725-36-4	133030-08-7
	202343-27-9		
	RL: PRP (Properties)		
	(dependence of charge carrier drift mobility on the structure and method of preparation of polyimide films based on bis(aminophenyl)anthracene)		
RN	106725-35-3	CAPLUS	
CN	Poly[(1,1',3,3'-tetrahydrido-1',3,3'-tetraoxa[5,5'-bi-2H]-isindolo[2,2'-diyl]-1,4-phenylene)-9,10-anthracenediyl-1,4-phenylene] (9CI) (CA INDEX NAME)		

15 ANSWER 83 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



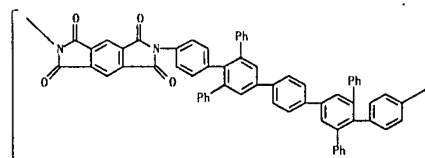
RN 133030-08-7 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)

15 ANSWER 83 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

L5	ANSWER #4 OF 201 CAPLUS COPYRIGHT 2007 ACS ON STN
AN	1998: 22074 CAPLUS
DN	128: 75755
TI	Synthesis of Soluble, Blue-Light-Emitting Rigid-Rod Polyamides and Polyimides Prepared from 2,6,6',3'',5''-Tetraphenyl- or
OT	Tetra(4-Biphenyl)-4,4''-diamino-p-quinquephenyl-
AU	Spilopoulos Ioannis K., Mikroyannidis John A.
CS	Chemical Technology Laboratory Department of Chemistry, University of Patras, Patras, GR-26500, Greece
S0	Macromolecules (1998), 31(2), 515-521
PB	CODEN: MAMORX ISSN: 0024-9297
PT	American Chemical Society
JL	Journal
LA	English..
AB	2,6',6',3'',5''-Tetraphenyl- or tetra(4-biphenyl)-4,4' '-diamo-no- quinquephenyls were synthesized from the corresponding pyrrylium salts. Rigid-rod polyamides and polyimides containing Ph or 4-biphenyl side groups on the p-quinquephenyl segments of the backbone were then prepared The polyamides were characterized by inherent viscosity, elemental anal., <sup>1</sup> H-NMR, <sup>13</sup> C-NMR, x-ray anal., differential scanning calorimetry, thermograv. anal., thermogravimetric anal., isothermal gravimetic anal., and water uptake measurements. The polymers with 4-biphenyl pendant groups showed enhanced solubility, lower crystallinity and hydrophilicity, and higher thermal stability compared to polymers with Ph pendant groups. The polyamides displayed strong blue fluorescence in DMF solution The polyamide containing 4-biphenyl pendant groups possessed a well-defined chromophore, resulting from steric interaction in the polymer chain.
IT	20055-SG-P 200551-SG-PP Pyromellitic dianhydride 2,6',3'',5''-tetra(4-biphenyl)-4,4' '-diamino-p- quinquephenyl copolymer. SRU 200551-SG-AP. Benzophenonetetracarboxylic dianhydride 2,6',3'',5''-tetrataphenyl- 4,4' '-diamino-pquinquephenyl copolymer. SRU 200551-SG-OP. Benzophenonetetracarboxylic dianhydride 2,6',3'',5''-tetra(4- biphenyl)-4,4' '-diamino-pquinquephenyl copolymer. SRU RL: FRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and properties of blue-light-emitting rigid-rod polyamides and polyimides from tetraphenyl- or tetra(biphenyl)diamino-p-
RN	200551-SG-A CAPLUS
CN	Pol[([5-(7-diaryloxy)1,3,5,7-tetraoxabenz[a]1,2-c:[4,5-c']diptyrrole-2,6(H,3H)- diy)](2,3',5',5''-6'tetraphenyl[[1,1':4',4'':1'',4'',1'',4'',1'',1'- -di]])(2,6',3'',5''-divyl)](9CI). [CA INDEX NAME]

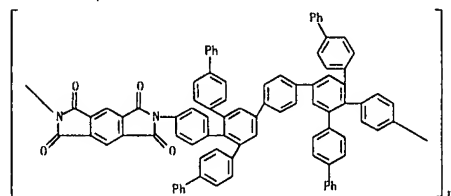


L5 ANSWER 84 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-B

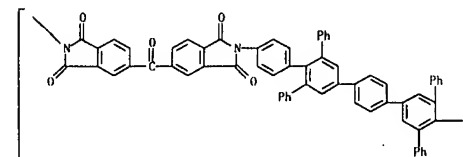


RN 200551-52-6 CAPLUS  
 CN Poly[(5,7-dihydro-1,3,5,7-tetraoxobenzol[1,2-c:4,5-c']dipyrrole-2,6(1H,3H)-diyl)[2,3':5'',6'-tetrakis([1,1'-biphenyl]-4-yl)[1,1':4'',1'':4'',1'':4'',1'':4''-quinquephenyl]-4,4''''-diyl]] (9C1) (CA INDEX NAME)



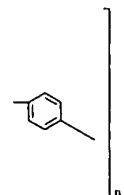
RN 200551-54-8 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[2,3':5'',6'-tetrakis([1,1'-biphenyl]-4-yl)[1,1':4'',1'':4'',1'':4'',1'':4''-quinquephenyl]-4,4''''-diyl]] (9C1) (CA INDEX NAME)

PAGE 1-A



L5 ANSWER 84 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

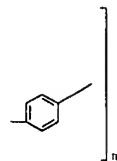
PAGE 1-B



RE. CNT 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

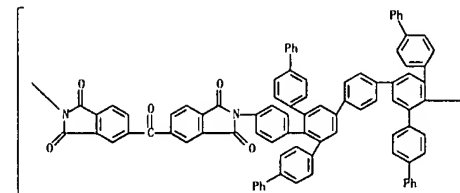
L5 ANSWER 84 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-B



RN 200551-56-0 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[2,3':5'',6'-tetrakis([1,1'-biphenyl]-4-yl)[1,1':4'',1'':4'',1'':4'',1'':4''-quinquephenyl]-4,4''''-diyl]] (9C1) (CA INDEX NAME)

PAGE 1-A



L5 ANSWER 85 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1997:745916 CAPLUS

DN 128:82232

TI Antiferroelectric liquid crystal cell and display

IN Fujikawa, Takayuki; Ynamoto, Norio; Koide, Shunichi; Suzuki, Yoshikazu

PA Nippondenso Co., Ltd., Japan; Showa Shell Sekiyu K. K.

SO Jpn. Kokai Tokkyo Koho, 20 pp.

CODEN: JKKXAF

DT Patent

LA Japanese

FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09297311	A	19971118	JP 1997-10445	19970123 <--
US 5747122	A	19980505	US 1996-709663	19960909 <--
PRAI JP 1996-51868	A	19960308		

AB The title liquid crystal cell has an antiferroelec. liquid crystal enclosed between a pair of electrode substrates each of which contains a polyimide orientation film containing 4,4'-diaminoterphenyl and pyromellitic acid dianhydride. The invention can achieve uniform orientation of the antiferroelec. liquid crystal mols. in a large area.

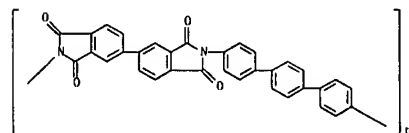
IT 26402-03-9P 55919-26-1P 200572-91-4P

RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USFS (Uses)

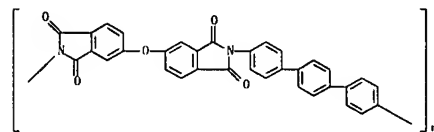
(Prepared for orientation film for antiferroelec. liquid crystal cell and display)

RN 26402-03-9 CAPLUS

CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3',3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)[1,1':4'',1'':4'',1'':4'',1'':4''-terphenyl]-4,4''-diyl]] (9C1) (CA INDEX NAME)

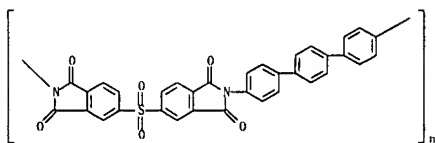


RN 55919-26-1 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[1,1':4'',1'':4'',1'':4'',1'':4''-terphenyl]-4,4''-diyl]] (9C1) (CA INDEX NAME)



RN 200572-91-4 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)sulfonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[1,1':4'',1'':4'',1'':4'',1'':4''-terphenyl]-4,4''-diyl]] (9C1) (CA INDEX NAME)

L5 ANSWER 85 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



L5 ANSWER 86 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1997:653813 CAPLUS

DN 127:307752

T1 Organo-soluble polyimides: synthesis and characterization of polyimides containing phenylated p-biphenyl and p-terphenyl units

AU Harris, Frank W.; Sakaguchi, Yoshiatsu; Shibata, Mitsuhiro; Cheng, Stephen Z. D.

CS The Maurice Morton Institute and the Department of Polymer Science, The University of Akron, Akron, OH, 44325-3909, USA

SO High Performance Polymers (1997), 9(3), 251-261

CODEN: HPPDEX; ISSN: 0954-0083

PB Institute of Physics Publishing

DT Journal

LA English

AB 4,4'-Diamino-2,2'-diphenylbiphenyl (I), 4,4'-diamino-2',3',5',6'-terphenyl (II) and 4,4'-diamino-2',3',5',6'-tetraphenyl-p-terphenyl (III) have been polymerized with several aromatic dianhydrides in refluxing m-cresol containing isoquinoline to afford a series of phenylated polyimides. The polymerization mixts. of I and 3,3',4,4'-biphenyltetracarboxylic dianhydride (BPDA) and 3,3',4,4'-benzophenonetetracarboxylic dianhydride (BTDA) and of II and pyromellitic dianhydride (PMDA) set to gel-like structures upon cooling. The gels, which displayed optical anisotropy typical of a liquid crystalline-like phase, could be dissolved by heating and re-formed by cooling. Although the p-phenylene, rigid-rod polymers obtained from the diamines and PMDA were only soluble in concentrated sulfuric acid, the polymers that were prepared from I and II and 3,3',4,4'-diphenylethertetracarboxylic dianhydride (DEPA), 3,3',4,4'-diphenylsulfonetetracarboxylic dianhydride (DSDA) and 2,2-bis[4-(1,2-dicarboxyphenyl)]-1,1,1,3,3,3-hexafluoropropane dianhydride (6FDA) were soluble in N-methyl-2-pyrrolidone (NMP), m-cresol and chlorinated solvents. In general, polymers prepared from II were the most soluble, while polymers prepared from III were the least soluble. The intrinsic viscosities of the polymers ranged from 0.61 to 5.1 dl. g<sup>-1</sup> in concentrated sulfuric acid or NMP at 30°. The glass transition temps. of most of the polymers could not be detected with differential scanning calorimetry. The temps. at which the polymers underwent 5% weight losses when subjected to thermal gravimetric anal. ranged from 500° to 600° in both air and nitrogen. Several of the polymers could be solution cast into thin, water-white flexible films.

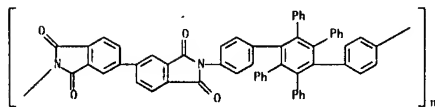
IT 121265-82-5P, 3,3',4,4'-Biphenyltetracarboxylic dianhydride-4,4'-diamino-2',3',5',6'-tetraphenyl-p-terphenyl copolymer, sru 121265-83-6P, 4,4'-Diamino-2',3',5',6'-tetraphenyl-p-terphenyl-3,3',4,4'-diphenylethertetracarboxylic dianhydride copolymer, sru 121265-84-7P, 4,4'-Diamino-2',3',5',6'-tetraphenyl-p-terphenyl-3,3',4,4'-diphenylsulfonetetracarboxylic dianhydride copolymer, sru

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (synthesis and characterization of organo-soluble polyimides containing phenylated p-biphenyl and p-terphenyl units)

RN 121265-82-5 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)(2',3',5',6'-tetraphenyl[1,1':4',1''-terphenyl]-4,4''-diyl)] (9C1) (CA INDEX NAME)

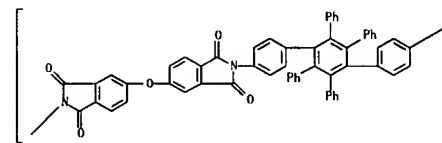
L5 ANSWER 86 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 121265-83-6 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)(2',3',5',6'-tetraphenyl[1,1':4',1''-terphenyl]-4,4''-diyl)] (9C1) (CA INDEX NAME)

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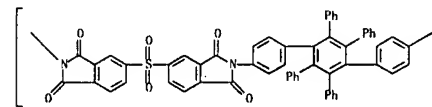


RN 121265-84-7 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)sulfonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)(2',3',5',6'-tetraphenyl[1,1':4',1''-terphenyl]-4,4''-diyl)] (9C1) (CA INDEX NAME)

L5 ANSWER 86 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

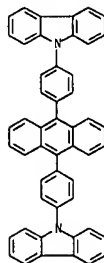
L5 ANSWER 87 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1997:519436 CAPLUS  
 DN 127:197527  
 TI Light-emitting material for organo-electroluminescence device and organo-electroluminescence device for which the light-emitting material is adapted  
 IN Tanano, Michiko; Enokida, Toshio  
 PA Toyo Ink Manufacturing Co., Ltd., Japan  
 SO Eur. Pat. Appl., 31 pp.  
 CODEX: EPXXDW  
 DT Patent  
 LA English  
 FAN CNT 1  

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 786926	A2	19970730	EP 1997-300551	19970129 <--
EP 786926	A3	19870806		
EP 786926	B1	20010822		
R: DE, FR, GR				
JP 09268283	A	19971014	JP 1997-7113	19970120 <--
JP 3511825	B2	20040329		
US 5811834	A	19980922	US 1997-789436	19970128 <--
PRA1 JP 1996-12488	A	19960129		
OS MARPAT 127:197527				
GI				

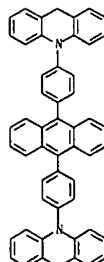
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Comps. for use in electroluminescent devices are described by the general formulas I and II (A-D are the same or different groups each a (un)substituted alkyl, (un)substituted monocyclic group, or (un)substituted fused polycyclic group, or A and B and/or C and D, together with the nitrogen atom to which they are attached, form a substituted or unsubstituted heterocyclic ring; R1-20 are independently selected from H, halogen atoms, (un)substituted alkyl, (un)substituted alkoxy, (un)substituted amino, (un)substituted monocyclic, or (un)substituted fused polycyclic groups; and XI-4 are independently selected from various linking groups). Television sets, light-emitting devices, copy machines, printers, liquid-crystal displays, displays, electrophotog. photoreceptors, photoelec. converters, solar cells, and image sensors containing electroluminescent devices employing the comps. are also described.  
 IT 194296-19-0 194296-21-4 194296-24-7  
 194296-26-9 194296-28-1 194296-30-5  
 194296-32-7  
 RI: DEV (Device component use); PRP (Properties); USES (Uses)  
 (light-emitting materials based on bis(aminophenyl)anthracene deriva. for organic electroluminescent devices and the electroluminescent devices and devices using them)  
 RN 194296-19-0 CAPLUS  
 CN 9H-Carbazole, 9,9'-(9,10-anthracenediyl)di-4,1-phenylene)bis- (9CI) (CA INDEX NAME)

L5 ANSWER 87 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

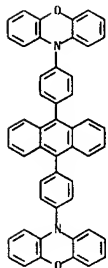


RN 194296-21-4 CAPLUS  
 CN Acridine, 10,10'-(9H,9'H)-(9,10-anthracenediyl)di-4,1-phenylene)bis- (9CI) (CA INDEX NAME)

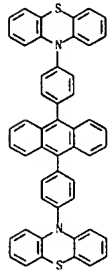


RN 194296-24-7 CAPLUS  
 CN 10H-Phenoxazine, 10,10'-(9,10-anthracenediyl)di-4,1-phenylene)bis- (9CI) (CA INDEX NAME)

L5 ANSWER 87 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



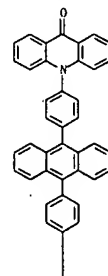
RN 194296-26-9 CAPLUS  
 CN 10H-Phenothiazine, 10,10'-(9,10-anthracenediyl)di-4,1-phenylene)bis- (9CI) (CA INDEX NAME)



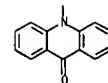
RN 194296-28-1 CAPLUS  
 CN 9(10H)-Acridinone, 10,10'-(9,10-anthracenediyl)di-4,1-phenylene)bis- (9CI) (CA INDEX NAME)

L5 ANSWER 87 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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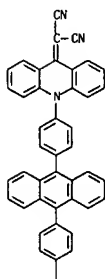
PAGE 2-A



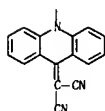
RN 194296-30-5 CAPLUS  
 CN Propanedinitrile, 2,2'-(9,10-anthracenediyl)bis(4,1-phenylene)-10(9H)-acridinyl-9-ylidene)bis- (9CI) (CA INDEX NAME)

L5 ANSWER 87 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A



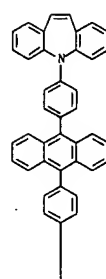
PAGE 2-A



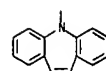
RN 194296-32-7 CAPLUS  
 CN 5H-Dibenz[b,f]azepine, 5,5'-(9,10-anthracenediyl)-4,1-phenylenebis- (9CI) (CA INDEX NAME)

L5 ANSWER 87 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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L5 ANSWER 88 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1997:224293 CAPLUS

DN 126:299493

TI Thermal stability of electroluminescent devices fabricated using novel charge-transporting materials

AU Tokito, Shizuo; Tanaka, Hiromitsu; Noda, Koji; Okada, Akane; Taga, Yasunori

CS Toyota Central Res. and Dev. Lab., Inc., Aichi, 480-11, Japan

SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1997), 38(1), 388-389

CODEN: PCPPAY; ISSN: 0032-3934

PB American Chemical Society, Division of Polymer Chemistry

DT Journal

LA English

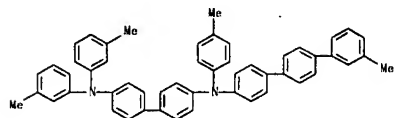
AB Novel electron- and hole-transporting materials for the electroluminescent devices are described. The basic structures of the hole-transporting materials are a linear or branch linkages of triphenylamine moiety. The electron-transporting materials are based on oxadiazole moiety with branched or twisted structures. The electroluminescent characteristics of these materials and devices based on them are also presented.

IT 189196-93-8

RL: DEV (device component use); PRP (Properties); USES (Uses)  
 (thermal stability of electroluminescent devices fabricated using novel charge-transporting materials)

RN 189196-93-8 CAPLUS

CN [1,1'-Biphenyl]-4,4'-diamine, N,N-bis(3-methylphenyl)-N'-(4-methylphenyl)-N'-(3'-methyl[1,1':4',1''-terphenyl]-4-yl)- (9CI) (CA INDEX NAME)



L5 ANSWER 89 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1997:120742 CAPLUS

DN 126:171448

TI Synthesis and spectral properties of 3-morpholino-6-arylphthalic anhydrides and -phthalimides

AU Kalosha, I. I.; Kolinkovich, O. G.; Sadovskii, O. L.

CS Inst. Mol. At. Fiz., Akad. Nauk Respub. Belarus, Minsk, Belarus

SO Zhurnal Obshchei Khimii (1996), 66(10), 1705-1709

CODEN: ZOKHA4; ISSN: 0044-460X

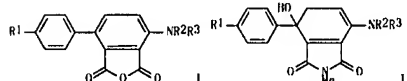
PB Nauka

DT Journal

LA Russian

OS CASREACT 126:171448

GI



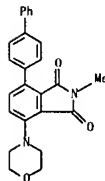
AB 3-Amino-6-arylphthalic anhydrides (I; R1 = H, hexyl, Ph, 4-nitrophenyl, 2,2-dichlorocyclopropyl; NR2R3 = NEt2, morpholino) were prepared by Diels-Alder reaction of 2-amino-5-arylfurans with maleic anhydride. Reaction of I with MeNH2 gave phthalimide derivs. (II). I and II having NR2R3 = morpholino exhibited fluorescence with  $\phi$  up to 0.3.

IT 187089-86-7P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and fluorescence of)

RN 187089-86-7 CAPLUS

CN 1H-Isindole-1,3(2H)-dione, 4-[1,1'-biphenyl]-4-yl-2-methyl-7-(4-morpholinyl)- (9CI) (CA INDEX NAME)



IT 185755-21-9P

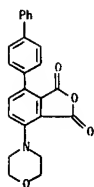
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation, fluorescence, and reaction with methylamine)

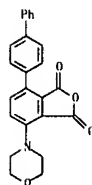
RN 185755-21-9 CAPLUS

CN 1,3-isobenzofuranone, 4-[1,1'-biphenyl]-4-yl-7-(4-morpholinyl)- (9CI) (CA INDEX NAME)

L5 ANSWER 89 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

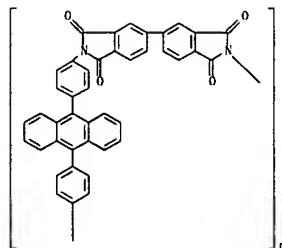


L5 ANSWER 90 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1997:589 CAPLUS  
 DN 126:97113  
 TI Vacuum vapor deposition of phthalimide and phthalanhydride derivatives on the substrates covered with monolayer films  
 AU Zhavnerko, G. K.; Kuchuk, T. A.; Agabekov, V. E.  
 CS Institute of Physical Organic Chemistry, Belarus Academy of Science, Minsk, 220072, Belarus  
 SO Thin Solid Films (1998), 286(1-2), 227-231  
 CODEN: TISFAP; ISSN: 0040-6090  
 PB Elsevier  
 DT Journal  
 LA English  
 AB The 3-morpholinylphthalimide and phthalanhydride derivative films deposited on hydrophobic substrates or substrates covered with Langmuir-Blodgett (LB) films were studied by linear dichroism measurements, x-ray diffraction, and electron microscopy methods. The structure and quality of the films depend on the deposited compound structure, the deposition rate and on the substrate temperature. Amorphous and polycryst. films of the substances studied are formed both on the hydrophobic and LB film covered substrates at a room temperature. When the substrate temperature was raised to 323 K 4-(4-morpholinyl)-7-phenyl-1,3-isobenzofurandione only tends to grow with preferably orientation on the LB film of the mixture of 7-[(4-acetoxy)phenyl]-4-(4-morpholinyl)-2-octadecyl-1H-isindole-1,3-(2H)-dione and the stearic acid covered substrate.  
 IT 185755-21-9  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)  
 (vacuum vapor deposition of phthalimide and phthalanhydride derivs. on substrates covered with monolayer film mixts. of [(acetoxy)phenyl](morpholinyl)octadecylisindolinedione and stearic acid)  
 RN 185755-21-9 CAPLUS  
 CN 1,3-isobenzofurandione, 4-[1,1'-biphenyl]-4-yl-7-(4-morpholinyl)- (9C1) (CA INDEX NAME)



L5 ANSWER 91 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1996:716411 CAPLUS  
 DN 126:19537  
 TI Electric field induced quenching of luminescence and its connection with photogeneration of charge carriers in aromatic polyimides based on 9,10-bis-(p-aminophenyl)anthracene  
 AU Kapustin, G. V.; Romyantsev, B. M.; Pebalk, D. V.; Kotov, B. V.  
 CS State Res. Cent. Russ. Fed. "Karpov Inst. Phys. Chem.", Moscow, 103064, Russia  
 SO Vysokomolekulyarnye Soedineniya, Seriya A i Seriya B (1996), 38(8), 1343-1350  
 CODEN: VSSREF  
 PB MAIK Nauka  
 DT Journal  
 LA Russian  
 AB Spectral-luminescent and photoelec. properties of PI films based on 9,10-bis-(p-aminophenyl)anthracene were studied. The PI samples studied exhibit luminescence of the exciplex type, which can be quenched by external elec. field. The relative quenching efficiency is proportional to the squared field strength. In a series of polyimides with diimide chain fragments of the same type, the quenching increases nonlinearly with the electron affinity of the diimide fragment. PI samples with the maximum quenching effect also exhibit the maximum photosensitivity in the regime of stationary photocond. Using the method of photoinduced decay of the surface potential, the quantum yields of photogenerated charge carriers were determined for the most sensitive PI sample. The field dependence of the quantum yield of photogenerated charge carriers is virtually identical with that of the luminescence quenching efficiency. In the absorption region of the main chromophore, the quantum yield within a given electronic absorption band sharply increases with the energy of the exciting light quantum. The magnetic field produces a pos. effect on the photogeneration of charge carriers, which is indicative of the ion-radical nature of the components of thermalized ion pairs formed in the system. The lifetime of the ion pairs is evaluated. On the basis of the results obtained, a mechanism of charge carrier photogeneration is proposed which takes into account structural features of the PI studied.  
 IT 106725-35-3 106725-36-4 133030-08-7  
 168026-63-9  
 RL: PRP (Properties)  
 (elec. field-induced quenching of luminescence and its connection with photogeneration of charge carriers in aromatic polyimides based on 9,10-bis-(p-aminophenyl)anthracene)  
 RN 106725-35-3 CAPLUS  
 CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isindole]-2,2'-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)

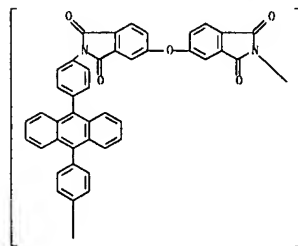
L5 ANSWER 91 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 106725-36-4 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*  
 RN 133030-08-7 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isindole-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)



RN 168026-63-9 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isindole-2,5-diyl)(3-oxo-1(3H)-



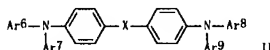
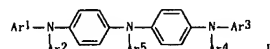
L5 ANSWER 91 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
 AN 1996:580231 CAPLUS  
 DN 125:234547  
 TI Organic electroluminescent element, organic thin film, and triamine compounds  
 IN Kawamura, Hisayuki; Nakamura, Hiroaki; Hosokawa, Chishio  
 PA Idemitsu Kosan Co., Ltd., Japan  
 SO PCT Int. Appl., 94 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 FAN. CNT 1

• STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT •

• STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT •

L5 ANSWER 92 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1996:580231 CAPLUS  
 DN 125:234547  
 TI Organic electroluminescent element, organic thin film, and triamine compounds  
 IN Kawamura, Hisayuki; Nakamura, Hiroaki; Hosokawa, Chishio  
 PA Idemitsu Kosan Co., Ltd., Japan  
 SO PCT Int. Appl., 94 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 FAN. CNT 1

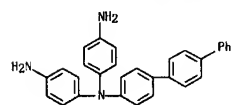
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 WO 9622273	A1	19960725	WO 1996-JP82	19960119 <--
W: CN, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
JP 08193191	A	19960730	JP 1995-6254	19950119 <--
JP 3306735	B2	20020724		
JP 09095470	A	19970408	JP 1995-252979	19950929 <--
JP 3139528	B2	20010305		
EP 805143	A1	19971105	EP 1996-900715	19960119 <--
EP 805143	B1	20011205		
R: BE, CH, DE, FR, GB, IT, LI, NL, SE				
CN 1168132	A	19971217	CN 1996-191527	19960119 <--
US 6074734	A	20000613	US 1997-860927	19970721 <--
PRA1 JP 1995-6254	A	19950119		
JP 1995-252979		19950929		
WO 1996-JP82	W	19960119		
G1				



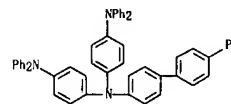
AB Triamine compds. are represented by general formula I (Ar1-5 = C6-18 aryl). An organic electroluminescent element comprises a pair of electrodes and, sandwiched therebetween, an organic compound layer containing at least a luminescent band layer and a hole transport band layer comprising a hole injection layer containing the triamine compound and a hole transport layer; and a two-layered organic thin film comprising a layer that contains I and has a thickness of 5 nm to 5 μm and another layer that contains a compound II (X = methylene, phenylene, biphenylene, O, S; Ar6-10 = C6-18 aryl) and has a thickness of 5 nm to 5 μm. The invention provides an organic electroluminescent element reduced in the risk of causing dielec. breakdown even when stored for long and remarkably enhanced in electroluminescence efficiency, a long-lived organic electroluminescent element excellent in the stability of electroluminescence even when continuously driven for long, and an organic thin film excellent in hole injection and transport characteristics.

IT 181367-39-5 181367-41-9  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical)

L5 ANSWER 92 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
 AN 1996:449126 CAPLUS  
 DN 125:128008  
 TI Manufacture of liquid-crystal display element  
 IN Okabe, Yoshitaki; Miwa, Takao; Iwakabe, Yasushi; Yokokura, Hisao; Iwasaki, Kishiro; Sasaki, Hiroshi; Takahashi, Akio  
 PA Hitachi Ltd, Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JXXXXF  
 DT Patent  
 LA Japanese  
 FAN. CNT 1

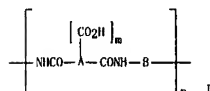
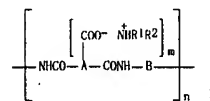


RN 181367-41-9 CAPLUS  
 CN 1,4-Benzenediamine, N-[4-(diphenylamino)phenyl]-N',N'-diphenyl-N-[1,1':4',1''-terphenyl]-4-yl- (9C1) (CA INDEX NAME)



L5 ANSWER 93 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1996:449126 CAPLUS  
 DN 125:128008  
 TI Manufacture of liquid-crystal display element  
 IN Okabe, Yoshitaki; Miwa, Takao; Iwakabe, Yasushi; Yokokura, Hisao; Iwasaki, Kishiro; Sasaki, Hiroshi; Takahashi, Akio  
 PA Hitachi Ltd, Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JXXXXF  
 DT Patent  
 LA Japanese  
 FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 JP 08087017	A	19960402	JP 1994-224675	19940920 <--
PRA1 JP 1994-224675		19940920		
G1				

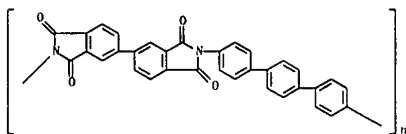


AB In the display element comprising a liquid crystal sandwiched between a pair of transparent substrates with transparent electrodes and with liquid crystal orientation films, a polycarboxylic acid salt I (A = tri- or tetravalent aromatic or aliphatic group; B = divalent aromatic or aliphatic group; E = monovalent aromatic or aliphatic group; R1-2 = H, Cl-3 alkyl, alkoxy, hydroxyalkyl; m = 1-2; n = 10-720) aqueous solution film is formed, heat-treated for imidation, and the resulting polyimide film rubbed to give the orientation film. Polyamic acid or polyamic acid amide II (A, B, m, n are the same as above.) is reacted with an amine compound R1R2NE (E = monovalent aromatic or aliphatic group; R1-2 = H, Cl-3 alkyl) to give a polycarboxylic acid salt film, heat-treated for imidation, and the polyimide film rubbed to give the orientation film. The orientation film is easy to prepare and gives large and stable tilt angles.

IT 26402-03-9, 3,3',4,4'-Biphenyltetracarboxylic acid dianhydride-4,4'-diamino-p-terphenyl copolymer, aru  
 RL: DEV (Device component use); USES (Uses)  
 (liquid-crystal display device with polyimide orientation film)

RN 26402-03-9 CAPLUS  
 CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)[1,1':4',1''-terphenyl]-4,4'-diyl] (9C1) (CA INDEX NAME)

L5 ANSWER 93 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



L5	ANSWER 94 OF 201 CAPULUS COPYRIGHT 2007 ACS on STN
AN	1996:442413 CAPULS
DI	125:127552
TN	Liquid crystal optically addressed spatial light modulators with organic polymer thin-film photoconductors
AU	Parfenov, Alexander; Rumsyntsev, Boris; Danilina, Ludmila; Pebalik, Dmitri; Kotov, Boris
CS	Lebedev Physics Institute, Moscow, 117924, Russia
SO	Proceedings of SPIE-The International Society for Optical Engineering ( 1996), 2732 (Smart Electronics and MEMS), 241-249
CO	CODEN: PSISDG; ISSN: 0277-786X
PR	SPIE-The International Society for Optical Engineering
UT	Journal
LA	English
AB	Organic polymer photoconductors are considered as a perspective materials for optically addressed spatial light modulators (SLM). A few type of materials were tested. Approach to the choice of materials is suggested.
IT	106725-36-4 RI: DEV (Device component use); PRP (Properties); USES (Uses) (Liquid crystal optically addressed spatial light modulators with organic polymer thin-film photoconductors)
RN	106725-36-4 CAPULUS
CN	Poly(1,3-dihydro-1,3-dioxo-2-oxo-1,4-indenole-1,3-diy)carbonyl(1,3-dihydro-1,3-dioxo-2-oxo-1,4-indenole-1,3-diy)-4-phenylene-9,10-anthracenediyl-1,4-phenylene[SGCL] (CA INDEX NAME)

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

L5 ANSWER 95 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1996:401770 CAPLUS

DN 125:143412

T1 Soluble, rigid-rod polyamide, polyimides, and polyazomethine with phenyl pendent groups derived from 4,4'-diamino-3,5,3'',5''-tetraphenyl-p-terphenyl

AU Spiliopoulos, Ioanik K.; Mikroyannidis, John A.  
CS Department of Chemistry, University of Patras, Patras, GR-26500, Greece

SO Macromolecules (1996), 29(16),  
CODEN: MAMOBX; ISSN: 0024-9297

PB American Chemical Society

DT Journal

English

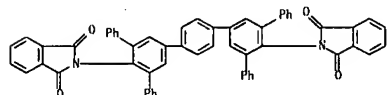
AB The reaction of 4,4'-(1,4-phenylene)bis(2,6-diphenylpyrrolum tetrafluoroborate) with  $\text{MeNO}_2$  afforded 4,4'-dinitro-3,3',5',5'-tetraphenyl-terphenyl, which was catalytically hydrogenated to the corresponding triphenylamine. The latter was used as a monomer for the preparation of a rigid-rod polyamide (with terephthalic acid), polyimides (with pyromellitic dianhydride and with benzophenonetetracarboxylic dianhydride), and polyazoethine (with terephthalaldehyde) bearing Ph pendant groups. The polymers were characterized by viscometric and gravimetric analysis. The polymers were amorphous and soluble in polar aprotic solvents. The polyimides showed outstanding thermal stability even in air. Dichlorobenzene and chloroform. The polyimide dissolved in  $\text{CHCl}_3$  (T<sub>g</sub>) and softening temperature at 135 and 155°, resp., whereas other polymers had T<sub>g</sub> 265°. The polymers were stable up to 397–411° in N<sub>2</sub> and 344–363° in air and afforded anaerobic char yields of 68–77% at 800°. In addition, the thermal stability of the polyazoethine was investigated as a function of curing time.

IT 179924-

RL: SPN (Synthetic preparation); PREP (Preparation)  
(model compound for polyimide; preparation of soluble, rigid-rod polyamide, polyimides, and polyazomethine with Ph pendent groups)

RN 179924-78-8 CAPLUS

1H-isoindole-1,3(2H)-dione, 2,2'-(5',5''-diphenyl[1,1':3',1'':4'',1''':3'',1''':4'''-quinquephenyl]-4'',6'-diyl)bis- (9CI) (CA INDEX NAME)

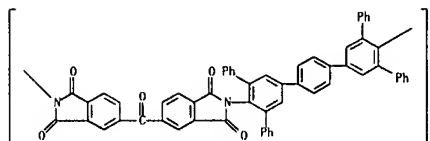


IT 179924-82-4P. Benzophenonetetracarboxylic dianhydride-4,4'-diamino-3,5,3',5'-tetraphenyl-p-terphenyl copolymer, SRU  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of soluble, rigid-rod polyamide, polyimides, and polyazomethine with Ph pendent groups)

RN 179924-82-4 CAPLUS

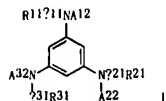
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindol-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindol-5,2-diyl)(5',5''-diphenyl[1,1':3',1'':4',1''':3'',1''':-quinacene]phenyl)-4'',6'-divyl)] (9C1) (CA INDEX NAME)

15 ANSWER 95 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



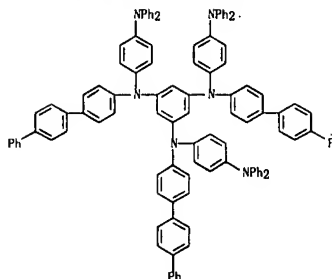
L5 ANSWER 96 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1996:273378 CAPLUS  
 DN 124:302069  
 TI Organic electroluminescent device  
 IN Shiota, Yasuhiko; Nakatani, Kenji; Inoue, Tetsuji; Nanba, Noryoshi  
 PA TDK Electronics Co., Ltd., Japan; TDK Corp.  
 SO Jpn. Kokai Tokkyo Koho, 19 pp.  
 CODEN: JKKXAF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 08048974	A	19960220	JP 1994-207970	19940809 <--
PRAI JP 3471910	B2	20031202		
OS JP 1994-207970		19940809		
GI MARPAT 124:302069				



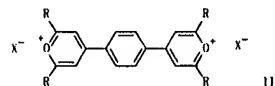
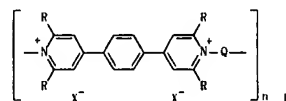
AB The organic electroluminescent device comprises a layer containing electron injection/transport compound and triarylamino benzene represented by I [R11, R21, and R31 = divalent aromatic residue; R11, R21, and R31 = N(R1)R2, N(R1)R3, N(R1)R4, R1, R2, or R3; R1, R2, or R3 = monovalent aromatic residue; R1 = alkyl; one of R1, R2, and R3 = N(R1)R2, N(R1)R3, or N(R1)R4; A12, A22, and A32 = monovalent aromatic residue, alkyl, or H].  
 IT 162879-27-8  
 RL: DEV (Device component use): USES (Uses)  
 (Organic electroluminescent device having layer containing triarylamino benzene derivative)  
 RN 162879-27-8 CAPLUS  
 CN 1,3,5-Benzenetriamine, N,N',N''-tris[4-(diphenylamino)phenyl]-N,N',N''-tris[1,1':4',1''-terphenyl]-4-yl)- (9C1) (CA INDEX NAME)

L5 ANSWER 96 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



L5 ANSWER 97 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1996:265062 CAPLUS  
 DN 124:290635  
 TI Polypyridinium salts  
 IN Harris, Frank W.; Chuang, Chun Hua K.  
 PA University of Akron, USA  
 SO Can. Pat. Appl., 48 pp.  
 CODEN: CPXXEB  
 DT Patent  
 LA English  
 FAN, CNT 1

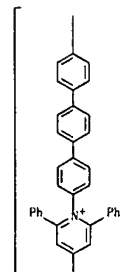
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI CA 2124647	A1	19951201	CA 1994-2124647	19940530 <--
PRAI CA 2124647	C	20070501		
GI CA 1994-2124647		19940530		



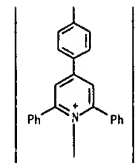
AB Title salts I (R = aryl, Q = arylene, X = halide, BF4, ClO4, BrO4, or triflate), useful for doping to prepare elec. conductors, are manufactured by polymerization of pyrylium salts II (R, X = same as in I) with H2NQH2 (Q = arylene) at 100-200° in an aprotic solvent. A typical polymer was manufactured by polymerization of II (R = Ph, X = ClO4) with 1,4-phenylenediamine 49.5 h in DMF at 145°.  
 IT 122538-91-4P  
 RL: DMF (Industrial manufacture): PREP (Preparation)  
 (polypyridinium salts for elec. conductors)  
 RN 122538-91-4 CAPLUS  
 CN Poly[(2,6-diphenylpyridinium-1,4-diyl)-1,4-phenylene(2,6-diphenylpyridinium-4,1-diyl)[1,1':4',1''-terphenyl]-4,4''-diyl bis[trifluoroborate(1-)] (9C1) (CA INDEX NAME)  
 CM I  
 CRN 122538-90-3  
 CMF (C5H H4O N2)n  
 CCI PMS

L5 ANSWER 97 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A



PAGE 2-A



CM 2

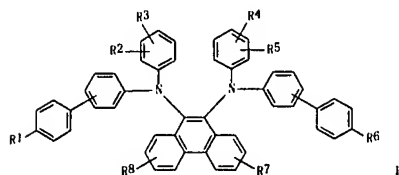
CRN 14874-70-5  
 CMF B F4  
 CCI CCS



L5 ANSWER 98 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1996:197217 CAPLUS  
 DN 124:274119  
 TI Hole-transporting material and electroluminescent device and  
 electrophotographic photoreceptor using it  
 IN Tanano, Michiko; Onikubo, Shunichi; Kanamura, Toshifumi; Ogawa, Tadashi;  
 Enokida, Toshio  
 PA Toyo Ink Mfg Co. Japan  
 SO Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JXXXXF  
 DT Patent  
 LA Japanese  
 FAN CNT 1  

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08020770	A	19960123	JP 1994-157078	19940708 <-
JP 3079903	B2	20000821		
JP 1994-157078		19940708		

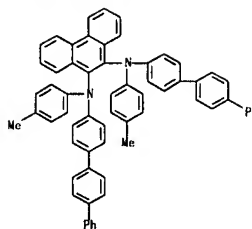
 PRA1  
 OS MARPAT 124:274119  
 GI



AB The hole-transporting material consists of a phenanthrene derivative I (R1-6 = H, halo, alkyl, alkoxy, cycloalkyl, carbocyclic aromatic group, heterocyclic group; R7-8 = H, halo, alkyl, alkoxy; R1-8 may be substituted). The electroluminescent device and the electrophotog. photoreceptor contain I as a hole-transporting material. A device containing I showed high luminescent efficiency and luminance.

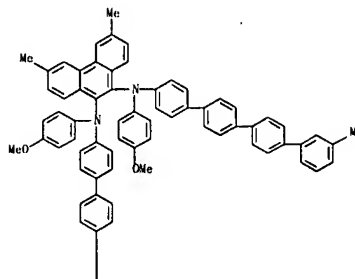
IT 175395-61-6  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (phenanthrene derivative hole-transporting material for electroluminescent devices and electrophotog. photoreceptors)  
 RN 175395-61-6 CAPLUS  
 CN 9,10-Phenanthrenediamine, N,N'-bis(4-methylphenyl)-N,N'-bis([1,1':4',1''-terphenyl]-4-yl)- (9CI) (CA INDEX NAME)

L5 ANSWER 98 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



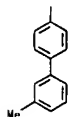
IT 175395-64-9  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (phenanthrene derivative hole-transporting material for electroluminescent devices and electrophotog. photoreceptors)  
 RN 175395-64-9 CAPLUS  
 CN 9,10-Phenanthrenediamine, N,N'-bis(4-methoxyphenyl)-3,6-dimethyl-N,N'-bis(3'''-methyl[1,1':4',1''':4'',1''']-quaterphenyl]-4-yl)- (9CI) (CA INDEX NAME)

PAGE 1-A

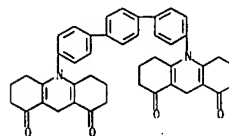


L5 ANSWER 98 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

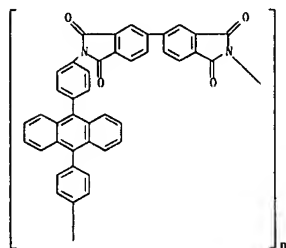
PAGE 2-A



L5 ANSWER 99 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1996:120313 CAPLUS  
 DN 124:178859  
 TI Synthesis of acridinedione derivatives as laser dyes  
 AU Shanmugasundaram, Palanisamy; Murugan, Periyasamy; Ramakrishnan, Vayalakkavoor T.; Srividya, Narayanan; Ramamurthy, Perumal  
 CS Dep. Organic Chem., Sch. Chem., Univ. Madras, Madras, 600 025, India  
 SO Heteroatom Chemistry (1996), 7(1), 17-22  
 CODEN: HETCEB; ISSN: 1042-7163  
 PB Wiley  
 DT Journal  
 LA English  
 AB Syntheses of 9-alkyl-, 10-alkyl-, 9,10-dialkyl-, and 10-aryl-3,4,6,7,9,10-hexahydro-1,8(2H,5H)acridinediones are described as a new class of laser dyes. Reactions of diamines with 2,2'-methylenebis(1,3-cyclohexanedione) yielded the resp. bisacridinediones. These dyes lase at 478-494 nm and are compared with the standard dye coumarin-102.  
 IT 174158-19-1P  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (synthesis of acridinedione derivs. as laser dyes)  
 RN 174158-19-1 CAPLUS  
 CN 1,8(2H,5H)-Acridinedione, 10,10'-[1,1':4',1''-terphenyl]-4,4''-diylbis[3,4,6,7,9,10-hexahydro- (9CI) (CA INDEX NAME)



L5 ANSWER 100 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1995:745187 CAPLUS  
 DN 123:199554  
 TI Synthesis, properties and x-ray diffraction study of aromatic polyimides based on 9,10-bis(p-aminophenyl)anthracene  
 AU Kotov, B. V.; Kapustin, G. V.; Chvalun, S. N.; Vasilenko, N. A.; Berendyaev, V. I.; Maslennikova, T. A.  
 CS Karpov Inst. Phys. Chem., Moscow, 103064, Russia  
 SO Vysokomolekulyarnye Soedineniya, Seriya A i Seriya B (1994), 36(12), 1972-81  
 CODEN: VSSBEE  
 PB MAIK Nauka  
 DT Journal  
 LA Russian  
 AB Aromatic polyimides based on 9,10-bis(p-aminophenyl)anthracene and a series of dianhydrides of aromatic tetracarboxylic acids were synthesized, and their thermal, phys., mech., and insulating properties were studied. The films of the synthesized polyimides possess high mech. strength and exhibit high thermal stability and heat resistance. Poly(pyromellitimide) and polyimide of diphenyl-3,4,3',4'-tetracarboxylic acid dianhydride are highly crystalline and exhibit a planar texture, which allowed the crystal lattice parameters of the latter compound to be determined. The oriented films of this polyimide are characterized by high strength. The elastic modulus is close to the values typical of liquid-crystal aromatic polymers.  
 IT 106725-35-3P, 9,10-Bis(p-aminophenyl)anthracene-3,4,3',4'-biphenyltetracarboxylic dianhydride copolymer, SRU polyimide  
 106725-36-4P, 9,10-Bis(p-aminophenyl)anthracene-3,3',4,4'-benzophenonetetracarboxylic dianhydride copolymer, SRU polyimide  
 133030-08-7P, 9,10-Bis(p-aminophenyl)anthracene-3,3',4,4'-diphenyloxyltetracarboxylic acid anhydride copolymer, SRU polyimide  
 168026-63-9P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (synthesis and properties of)  
 RN 106725-35-3 CAPLUS  
 CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isindole]-2,2'-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)

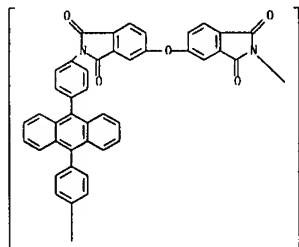


RN 106725-36-4 CAPLUS

L5 ANSWER 100 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*  
 RN 133030-08-7 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isindole-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)



RN 168026-63-9 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isindole-2,5-diyl)(3-oxo-1(3H)-isobenzofuran-1-ylidene)(1,3-dihydro-1,3-dioxo-2H-isindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)

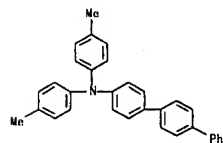
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

L5 ANSWER 101 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1995:662912 CAPLUS  
 DN 123:270709  
 TI Electrophotographic photosensitive member and electrophotographic apparatus, device unit and facsimile machine using the same  
 IN Maruyama, Akio; Kikuchi, Toshiro; Amamiya, Shoji; Nagahara, Shin; Aoki, Katsumi  
 PA Canon K. K., Japan  
 SO U.S., 43 pp. Cont.-in-part of U.S. Ser. No. 852,720, abandoned.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN CNT 2  

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5422210	A	19950606	US 1992-968465	19921029 <--
JP 05100464	A	19930423	JP 1992-62306	19920318 <--
JP 2584930	B2	19970226		
PRAI JP 1991-77290	A	19910318		
JP 1991-77291	A	19910318		
JP 1991-77292	A	19910318		
US 1992-852720	B2	19920317		
JP 1992-62306	A	19920318		

OS MARPAT 123:270709  
 AB An electrophotog. photosensitive member comprises a conductive support, a photosensitive layer and a protective layer, the protective layer containing resin formed by hardening a light-setting type acrylic monomer, and the photosensitive layer containing  $\geq 1$  compound selected from the group consisting of (A), (B) and (C) below: (A) styryl comds. (Ar1)(Ar2)N-Ar3-(CH<sub>2</sub>C(R2))<sub>n</sub>-R1 (m.p.  $\leq 135^\circ$ ) (Ar1 and Ar2 are aromatic ring groups, Ar3 is a bivalent aromatic ring group or a bivalent heterocyclic group, R1 is an alkyl group or an aromatic ring group, R2 is a H atom, an alkyl group or an aromatic ring group, and n is 1 or 2. R1 and R2 possibly linking to form a ring when n = 1); (B) triarylamine compound having a structure expressed by the following formula Ar4Ar5Ar6 (m.p.  $\leq 150^\circ$ ) (Ar4, Ar5 and Ar6 = aromatic ring group or a heterocyclic group); (C) hydrazone comds. A-[CR3:NR4R5]m (m.p.  $\leq 155^\circ$ ) (R3 is a H atom or an alkyl group, R4 and R5 are alkyl groups, aralkyl groups or aromatic ring groups, m is 1 or 2, A is an aromatic ring group, a heterocyclic group or -CH<sub>2</sub>C(R6)R7 (R6 and R7 are H atoms, aromatic ring groups or heterocyclic groups, but will never be H atoms at the same time)). The photosensitive member suppresses the occurrence of cracks during forming of the protective layer, has high durability, and is free from any image defects.  
 IT 130965-29-6  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (charge transport agent for electrophotog. photoconductor)  
 RN 130965-29-6 CAPLUS  
 CN [(1,1':4',1''-Terphenyl)-4-amine, N,N-bis(4-methylphenyl)- (9C1) (CA INDEX NAME)



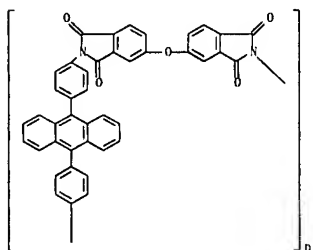
L5 ANSWER 101 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

L5 ANSWER 102 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1995:570839 CAPLUS  
 DN 124:41400  
 TI Photoresist composition for i-line exposure  
 IN Matsuoaka, Yoshio; Yokota, Kanichi; Katoaka, Yasuhiro  
 PA Asahi Chemical Ind, Japan  
 SO Jpn. Kokai Tokkyo Koho, 40 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN, CNT 2

L5 ANSWER 102 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 06342211	A	19941213	JP 1993-181529	19930722 <—
JP 2826940	B2	19981118		
US 6182580	A	20001219	US 1995-451616	19950526 <—
US 6482569	B1	20021119	US 2000-572203	20000517 <—
PRAI JP 1992-215732	A	19920722		
JP 1992-273222	A	19921012		
JP 1993-66725	A	19930325		
JP 1993-79504	A	19930406		
US 1993-95783	B1	19930721		
US 1995-451616	A1	19950526		

AB The title composition comprises (A) aromatic polyimide precursor with amide bond concentration of  $\geq 1.5$  mol/kg and containing a repeating unit,  
 $\text{O}(\text{COR}) (\text{COR}') \text{CONH}(\text{NH}) [X = \text{tetraivalent aromatic containing no F; positions of COR, COR', and CONH are ortho-positions each other; R, R' = OR1, NHR2, O-NR3R4R5R6, OH; R1-3 = organic group containing ethylenic unsatd. bonds; R4-6 = H, C1-6 hydrocarbyl; Y = divalent aromatic containing no F}]. (R) \text{photopolymer, initiator, and (C) solvent.}$   
 IT 133030-08-7  
 RL: DEV (Device component use): USES (Uses)  
 (i-line exposed polyimide)  
 RN 133030-08-7 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isindol-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isindol-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)

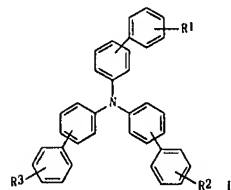
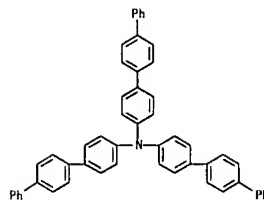


L5 ANSWER 103 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1995:529128 CAPLUS  
 DN 122:302603  
 TI Organic electroluminescent device containing triarylamine derivative  
 IN Shirota, Yasuhiko; Nakatani, Kenji; Inoe, Tetsuji; Nambu, Noryoshi  
 PA TDK Electronics Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

L5 ANSWER 103 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 07053955	A	19950228	JP 1993-220570	19930812 <—
JP 3278252	B2	20020430		
PRAI JP 1993-220570		19930812		

OS MARPAT 122:302603  
 GI



AB The device has  $\geq 1$  layer containing  $\geq 1$  triarylamine derivative I  
 (R1-3 = H, halo, aliphatic hydrocarbyl, aromatic hydrocarbyl, substituted amino, aromatic heterocyclic group). In the device, a light-emitting layer or a hole-injection-transporting layer may contain I. The device showed high luminance and stable blue luminescence.  
 IT 145693-79-4P  
 RL: PNU (Preparation, unclassified): PREP (Preparation)  
 (blue-emitting electroluminescent device containing triarylamine derivative with high luminance)  
 RN 145693-79-4 CAPLUS  
 CN [1,1':4',1''-terphenyl]-4-amine, N,N-bis([1,1':4',1''-terphenyl]-4-yl)-(9C1) (CA INDEX NAME)

L5 ANSWER 104 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1995:489867 CAPLUS

DN 122:277531

TI Trisarylamino benzene derivatives, compounds for organic electroluminescent element, and organic electroluminescent element.

IN Shirota, Yasuhiko; Nakaya, Kenji; Okada, Norihiro; Namba, Kenryo

PA Japan

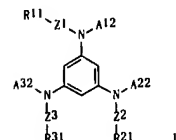
SO Eur. Pat. Appl., 22 pp.

DT Patent

LA English

FAN, CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 611148	A1	19940817	EP 1994-300954	19940209 <—
	EP 611148	B1	19980603		
	R: DE, FR, GB				
	JP 07097355	A	19950411	JP 1994-36605	19940209 <—
	JP 3419534	B2	20030623		
	US 5508136	A	19980416	US 1994-194145	19940210 <—
PRA1	JP 1993-45785	A	19930210		
	JP 1993-140041	A	19930519		
OS	WARPAT 122:277531				
GI					



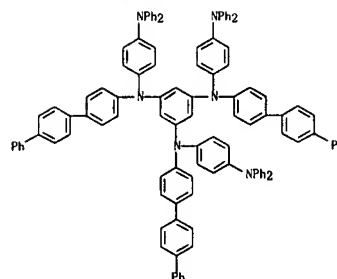
AB Novel trisarylamino benzene derivs. are represented by the formula 1 [Z1, Z2, and Z3 = divalent aromatic ring residues, R11, R21, and R31 = groups represented by -NZ1Z2, -NHZ1, -NR1Z1, -Z1, -OZ1 or -SZ1 wherein each of Z1 and Z2 = a monovalent aromatic ring residue, and R1 is an alkyl group, Z1 of R11, R21, and R31 being a group represented by -NZ1Z2, -NHZ1 or -NR1Z1, and A12, A22, and A32 = aromatic residues, alkyl groups or H]. An organic electroluminescent element which uses the compound in an organic compound layer, especially in a hole injection transport layer provides uniform plane light emission and is durable enough to maintain luminance.

IT 162879-27-8  
RL: MDA (Modifier or additive use): USES (Uses)  
(electroluminescent element component)

RN 162879-27-8 CAPLUS

CN 1,3,5-Benzenetriamine, N,N',N''-tris[4-(diphenylamino)phenyl]-N,N',N''-tris[1,1':4',1''-terphenyl]-4-yl)- (9C1) (CA INDEX NAME)

L5 ANSWER 104 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



L5 ANSWER 105 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1995:234807 CAPLUS

DN 122:9651

TI preparation of tris(p-terphenyl-4-yl)amine for photoelectric converters, thermochromic devices, and optical memory devices.

IN Shirota, Yasuhiko; Inada, Hiroshi; Higuchi, Shoichi; Onishi, Katsuhira;

Nomura, Michuki

PA Bando Chemical Ind. Japan

SO Jpn. Kokai Tokkyo Koho, 3 pp.

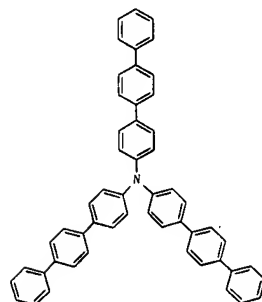
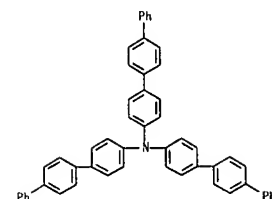
DT Patent

LA Japanese

FAN, CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06228062	A	19940816	JP 1993-14556	19930201 <—
	JP 3515138	B2	20040405		
PRA1	JP 1993-14556		19930201		
OS	CASREACT 122:9651				
GI					

L5 ANSWER 105 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



AB The title compound (1) was prepared in 5.1% yield via treatment of 4,4',4''-triiodotriphenylamine with a Grignard reagent prepared from 4-bromobiphenyl-4-bromobiphenyl in THF-Et2O containing dichloro[1,3-bis(diphenylphosphino)propane]nickel(II).

IT 145693-79-4P  
RL: IMP (Industrial manufacture): SPN (Synthetic preparation): PREP (Preparation)

(preparation of tris(p-terphenyl-4-yl)amine for photoelec. converters, thermochromic devices, and optical memory devices.)

RN 145693-79-4 CAPLUS

CN [1,1':4',1''-Terphenyl]-4-amino, N,N-bis[1,1':4',1''-terphenyl]-4-yl)- (9C1) (CA INDEX NAME)

L5 ANSWER 106 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1995:225221 CAPLUS

DN 122:10863

TI Aromatic poly(pyridinium salts): synthesis and structure of

organo-soluble, rigid-rod poly(pyridinium tetrafluoroborate)s

AU Harris, Frank W.; Chuang, Kethy C.; Huang, Shih Ann X.; Janimak, James J.;

Cheng, Stephen Z. D.

CS Department Polymer Science, University Akron, Akron, OH, 44325-3909, USA

SO Polymer (1994), 35(23), 4940-8

COEN: POLMAG; ISSN: 0032-3861

PB Elsevier

DT Journal

LA English

AB A series of phenylated, aromatic poly(pyridinium tetrafluoroborates) has been prepared by the polymerization of 4,4'-(1,4-phenylene)bis(2,6-diphenylpyrylium tetrafluoroborate) with aromatic diamines in a dimethylsulfoxide/toluene mixture at 145-150°. The water generated by the transformation of the pyrylium rings to pyridinium rings was distilled from the reaction mixture as a water/toluene azeotrope. All-para-extended, rigid-rod polymers with inherent viscosities as high as 4.9 dL g<sup>-1</sup> were obtained that were soluble in polar aprotic solvents. The polymers could be solution cast into tough, flexible films. Although the glass transition temps. of the poly(pyridinium salts) were difficult to detect with differential scanning calorimetry, they displayed distinctive melting endotherms with min. above 380°. Thermogravimetric anal. showed that the polymers began to decompose near 360° prior to melting. Wide-angle x-ray diffraction anal. revealed that the chains were packed in a structure similar to that of a smectic liquid crystalline glass.

IT 122538-91-4P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and characterization of organo-soluble rigid-rod poly(pyridinium tetrafluoroborates))

RN 122538-91-4 CAPLUS

CN Poly[(2,6-diphenylpyridinium-1,4-diyl)-1,4-phenylene(2,6-diphenylpyridinium-4,1-diyl)][1,1':4',1''-terphenyl]-4,4'-diyl bis[tetrafluoroborate(1-)] (9CI) (CA INDEX NAME)

CM 1

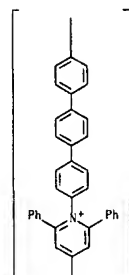
CRN 122538-90-3

CMF (C58 H40 N2)n

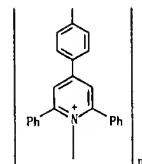
CCI PMS

L5 ANSWER 106 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



L5 ANSWER 107 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1994:680208 CAPLUS

DN 121:280208

TI Further studies on the polarizabilities and hyperpolarizabilities of the

substituted polyenes and polyphenyls

AU Albert, Israel D. L.; Pugh, David; Morley, John O.

CS Department Pure Applied Chemistry, University Strathclyde, Glasgow, UK G1

SO Journal of the Chemical Society, Faraday Transactions (1994),

90(18), 2517-22

COEN: JCFTEV; ISSN: 0956-5000

DT Journal

LA English

AB The polarizabilities and first and second hyperpolarizabilities of the all-trans donor-acceptor substituted polyenes and polyphenyls. (CH3)2N-(CH=CH-CH=CH)n-NO2 and (CH3)2N-(C6H4)n-NO2 have been calculated for values of n = 1 to 9 at a frequency corresponding to 0.65 eV, using a modified CNDO/5B method. A basis set including the 325 singly and doubly excited  $\pi$ -electron configurations obtained from a group of six occupied and four unoccupied Hartree-Fock  $\pi$  orbitals has been used and the polarizabilities and hyperpolarizabilities calculated by the correction vector method. The results are compared with earlier work based on an expansion in terms of a large set of singly excited configurations only. In the case of n = 3 for the polyenes and n = 2 for the polyphenyls calcs. have been carried out with the complete set of  $\pi$ - $\pi^*$  configurations for each mol., using both the correction vector method and the sum-over-states expansion. The results confirm the assessment of the quadratic non-linear optical potential of these comds. made in earlier work, although the absolute values of the first hyperpolarizabilities are somewhat reduced.

IT 107716-13-2 107716-14-3 107716-15-4

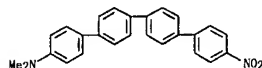
107716-16-5 108030-45-1 114261-05-1

RL: PRP (Properties)  
(polarizabilities and hyperpolarizabilities of all-trans donor-acceptor substituted polyenes and polyphenyls)

RN 107716-13-2 CAPLUS

CN [1,1':4',1''-4'-Quaterphenyl]-4-amine, N,N-dimethyl-4'-nitro-

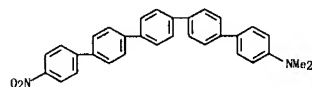
(9CI) (CA INDEX NAME)



RN 107716-14-3 CAPLUS

CN [1,1':4',1''-4'-Quaterphenyl]-4-amine, N,N-dimethyl-4'-nitro-

(9CI) (CA INDEX NAME)



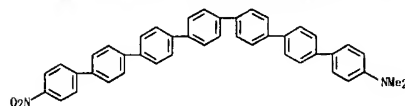
RN 107716-15-4 CAPLUS

CN [1,1':4',1''-4'-Quaterphenyl]-4-amine, N,N-dimethyl-4'-nitro-

(9CI) (CA INDEX NAME)

L5 ANSWER 107 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

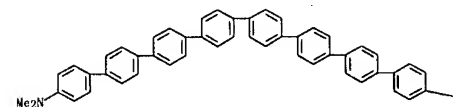
PAGE 1-A



RN 107716-16-5 CAPLUS  
CN [1,1':4',1''-4'-Quaterphenyl]-4-amine, N,N-dimethyl-4'-nitro-

(9CI) (CA INDEX NAME)

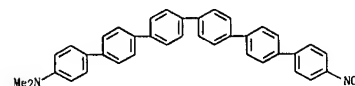
PAGE 1-B



-NO2

RN 108030-45-1 CAPLUS  
CN [1,1':4',1''-4'-Quaterphenyl]-4-amine, N,N-dimethyl-4'-nitro-

(9CI) (CA INDEX NAME)



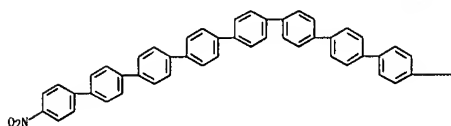
RN 114261-05-1 CAPLUS  
CN [1,1':4',1''-4'-Quaterphenyl]-4-amine, N,N-dimethyl-4'-nitro-

(9CI) (CA INDEX NAME)



L5 ANSWER 107 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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PAGE 1-B



L5 ANSWER 108 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1994:591297 CAPLUS

DN 121:191297

TI Electrophotographic photoreceptors using triphenylamines and benzidines as charge-transporting agents

IN Nishita, Kyokazu; Kobayashi, Tomoo; Kamisaka, Tomosumi; Ishii, Toru; Hoshizaki, Takatoshi; Kojima, Fumio; Igaraishi, Ryosaku

PA Fuji Xerox Co Ltd, Japan

SO Jpn Kokai Tokkyo Koho, 11 pp.

CODEN: JKKXAF

DT Patent

LA Japanese

FAN CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 06130685	A	19940513	JP 1992-304406	19921019 <--
JP 2738242	R2	19980408		
US 5424159	A	19950613	US 1993-102246	19930805 <--
PRAI JP 1992-236320	A	19920813		
JP 1992-304406	A	19921019		
OS MARPAT 121:191297				
GI				

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The photoreceptors comprise an elec. conductive support coated with a photosensitive layer containing a charge-generating agent, a mixture of triphenylamines I (R1-2 = H, Cl-4 alkyl, alkoxy; R3 = H, Cl-4 alkyl, C6-12 aryl) and benzidines II (R4, R7 = H, alkyl, alkoxy, halo; R5-6, R8-9 = H, alkyl, alkoxy, halo, substituted amino; n, n = 1-2) as a charge-transporting agent, and a binder resin mainly containing a polycarbonate having a repeating unit III. The photoreceptors show high wear resistance and image transferability.

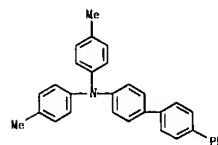
IT 130965-29-6

RL: USES (Uses)

(electrophotog. photoreceptors containing benzidines and, as charge-transporting agent)

RN 130965-29-6 CAPLUS

CN [1,1':4',1''-Terphenyl]-4-amine, N,N-bis(4-methylphenyl)- (9C1) (CA INDEX NAME)



L5 ANSWER 109 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1994:591210 CAPLUS

DN 121:191210

TI High sensitivity and durable organic electrophotographic photoreceptor

IN Kikuchi, Norihiro; Senoo, Akihiro; Kanamaru, Tetsuo; Tanaka, Takakazu

PA Canon Kk, Japan

SO Jpn Kokai Tokkyo Koho, 25 pp.

CODEN: JKKXAF

DT Patent

LA Japanese

FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 05303219	A	19931116	JP 1992-129425	19920423 <--
JP 3248627	R2	20020121		
PRAI JP 1992-129425		19920423		

AB The photosensitive layer of the title photoreceptor contains &gt;2 kinds of aryl amine compds. A1A2NA3 [A1-3 = (sub)aryl, (sub)heterocyclyl] of which

at least one has a m.p. &lt;150°. The aryl amine compds. are

used as charge transport substances having high capability for

transporting holes and the photoreceptor shows high sensitivity and

voltage stability for repeated use.

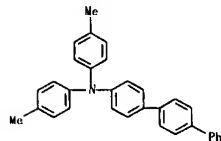
IT 130965-29-6 130965-30-9

RL: USES (Uses)

(electrophotog. charge transport substance)

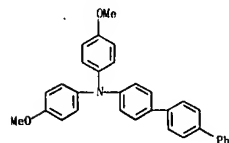
RN 130965-29-6 CAPLUS

CN [1,1':4',1''-Terphenyl]-4-amine, N,N-bis(4-methylphenyl)- (9C1) (CA INDEX NAME)



RN 130965-30-9 CAPLUS

CN [1,1':4',1''-Terphenyl]-4-amine, N,N-bis(4-methoxyphenyl)- (9C1) (CA INDEX NAME)



L5 ANSWER 110 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1994:495914 CAPLUS

DN 121:95914

TI Light-sensitive elements for electrophotography

IN Nakamura, Yoichi; Mori, Nobuyoshi; Nogami, Sumitaka

PA Fuji Electric Co., Ltd., Japan

SO Ger. Offen., 17 pp.

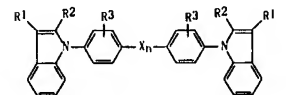
CODEN: GWXXBX

DT Patent

LA German

FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 4315756	A1	19931118	DE 1993-4315756	19930511 <--
DE 4315756	C2	20000615		
JP 06027695	A	19940204	JP 1992-177254	19920706 <--
JP 2817822	R2	19981030		
US 5368966	A	19941129	US 1993-59988	19930512 <--
PRAI JP 1992-120901	A	19920514		
JP 1992-177254	A	19920706		
OS MARPAT 121:95914				
GI				



AB Light-sensitive elements for electrophotog. comprise elec. conductive substrates on which are laminated light-sensitive layers which include indole derivs. described by the general formula I (R1 and R2 are selected from H and Cl-9 alkyl, aralkyl, allyl and alkoxy groups with the restriction that R1 and R2 are not both H; R3 is selected from H, halogen atoms, and Cl-3 alkyl and alkoxy groups; X is selected from an oxygen atom or alkylene, allylene, carbonyl, sulfonyl, sulfinyl, and sulfide groups; and n = 0 or 1).

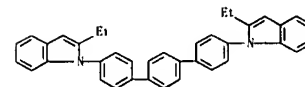
IT 156411-54-0

RL: USES (Uses)

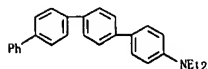
(electrophotog. light-sensitive elements containing)

RN 156411-54-0 CAPLUS

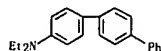
CN III-Indole, 1,1'-[1,1':4',1''-terphenyl]-4,4''-diylbis[2-ethyl- (9C1) (CA INDEX NAME)]



LS ANSWER 111 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1994:495697 CAPLUS  
 DN 121:95697  
 TI Photoinduced Intramolecular Electron Transfer in p-Polyphenylamines and  
 1-(p-(N,N-Dialkylamino)-p-polyphenyl)naphthalenes  
 AU Foley, Michael J.; Singer, Lawrence A.  
 CS Department of Chemistry, University of Southern California, Los Angeles,  
 CA, 90089-0744, USA  
 SO Journal of Physical Chemistry (1994), 98(26), 6430-5  
 CODEN: JPCHAK; ISSN: 0022-3654  
 DT Journal  
 LA English  
 AB Photoinduced intramol. electron transfer in two series of aromatic amines of  
 the type aryl-(COH)n-NR<sub>2</sub>, where aryl is Ph and 1-naphthyl and n = 1-3,  
 has been studied. From the solvatochromic behavior of the fluorescence  
 from these compds., excited-state dipole moments ranging from 10.9 to 29.9  
 D have been measured, suggesting that the emissions occur from  
 charge-transfer states, except in 4-(N,N-diethylamino)biphenyl (aryl =  
 phenyl; n = 1). The large quantum yields and short fluorescence lifetimes  
 indicate efficient electronic communication between the donor and acceptor  
 (ket > 108 s<sup>-1</sup>). Good agreement was found between the observed and calculated  
 fluorescence energies in polar solvents using a simple electrostatic  
 model. The results suggest that the Ph rings in the extended systems act  
 as part of the donor or acceptor moieties in electron transfer and are not  
 spacer (or insulating) groups.  
 IT 139269-37-7, 4-(N,N-Diethylamino)p-quaterphenyl  
 156600-88-3, 4-(N,N-Diethylamino)p-terphenyl 156600-90-7  
 1-(p-(N,N-Dibutylamino)-p-terphenyl)naphthalene  
 RL: PRP (Properties)  
 (photoinduced intramol. electron transfer in, solvent effect on)  
 RN 139269-37-7, CAPLUS  
 CN [1,1':4,1'':4'',1'''-Quaterphenyl]-4-amine, N,N-diethyl- (9C1) (CA INDEX  
 NAME)



RN 156600-88-3 CAPLUS  
 CN [1,1':4,1'':4'',1'''-Terphenyl]-4-amine, N,N-diethyl- (9C1) (CA INDEX NAME)



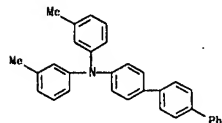
RN 156600-90-7 CAPLUS  
 CN [1,1':4,1'':4'',1'''-Terphenyl]-4-amine, N,N-dibutyl-4''-(1-naphthalenyl)- (9C1)  
 (CA INDEX NAME)

LS ANSWER 112 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1994:422447 CAPLUS  
 DN 121:22447  
 TI Electrophotographic photosensitive member  
 AU Kanemaru, Tetsuro; Kikuchi, Toshihiro; Senoo, Akihiro; Tanaka, Takakazu  
 CS Canon K. K., Japan  
 SO Eur. Pat. Appl., 79 pp.  
 CODEN: EPXKDW  
 DT Patent  
 LA English  
 FAN, CMT

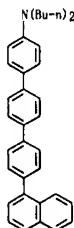
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 567396	A1	19931027	EP 1993-401030	19930421 <--
EP 567396	B1	19990721		
R: DE, FR, GB				
JP 05303220	A	19931116	JP 1992-129417	19920423 <--
JP 2798200	B2	19980917		
JP 05303225	A	19931116	JP 1992-129421	19920423 <--
JP 2839053	B2	19981216		
US 5415962	A	19950516	US 1993-48526	19930420 <--
JP 0601868	A	19940121	JP 1993-97743	19930423 <--
JP 3155856	B2	20010416		
CN 1082726	A	19940223	CN 1993-106367	19930423 <--
CN 1086231	B	20020612		
PRA1 JP 1992-129417	A	19920423		
JP 1992-129421	A	19920423		
JP 1992-129426	A	19920423		

OS MARPAT 121:22447  
 AB An electrophotog. photosensitive member is constituted by disposing a  
 photosensitive layer on an electroconductive support. The photosensitive  
 layer is characterized by containing a specific fluorene compound or by containing  
 another specific fluorene compound and a specific triphenylamine compound. The  
 photosensitive layer is suitable for providing an electrophotog. apparatus  
 showing excellent electrophotog. characteristics such as high  
 photosensitivity, good potential stability in repetitive use, decreased  
 transfer memory, no crack in the photosensitive layer and no crystallization of  
 charge-transporting material.

IT 155926-49-1  
 RL: USES (Uses)  
 (photosensitive compns. containing, for electrophotog photoreceptors)  
 RN 155926-49-1 CAPLUS  
 CN [1,1':4,1'':4'',1'''-Terphenyl]-4-amine, N,N-bis(3-methylphenyl)- (9C1) (CA INDEX  
 NAME)



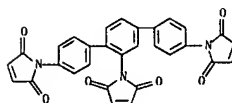
LS ANSWER 111 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



LS ANSWER 113 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1994:299908 CAPLUS  
 DN 120:299908  
 TI Studies on Bismaleimides and Related Materials. 4. Synthesis and  
 Characterization of New Bismaleimides Based on Terphenyl,  
 Tetraphenylketazine, and Bisphenol A: "Reactive Building Blocks" for  
 Bismaleimides  
 AU Preston, P. N.; Sheh, V. K.; Simpson, S. W.; Soutar, I.; Stewart, N. J.  
 CS Department of Chemistry, Heriot-Watt University, Riccarton/Edinburgh, EH14  
 4AS, UK  
 SO Macromolecules (1994), 27(5), 1147-53  
 CODEN: MAMORX; ISSN: 0024-9297  
 DT Journal  
 LA English  
 AB New bismaleimides (BNI's) have been synthesized from Bisphenol A,  
 terphenyl, or tetraphenylketazine. In three monomers, an addnl.  
 functionality has been introduced with respect to conventional  
 bismaleimides, e.g. allyl, N-maleimido and ketazine. Cure profiles for  
 new monomers have been determined by dynamic mech. thermal anal. by supporting  
 them on glass braids. Resins have been prepared on a milligram scale and  
 have been studied by thermal gravimetric anal. for evaluation of thermal  
 and thermooxidative stability.  
 IT 153176-28-4P 153176-32-OP  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and curing profiles of)  
 RN 153176-28-4 CAPLUS  
 CN 1H-Pyrrole-2,5-dione, 1,1'-[1,1':4,1'':4'',1'''-terphenyl]-2',4,4''-  
 triyl)tris-, homopolymer (9C1) (CA INDEX NAME)

CN 1

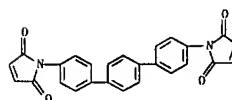
CRN 153176-27-3  
 CMT C30 H17 N3 O6



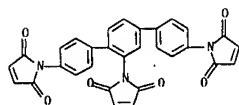
RN 153176-32-0 CAPLUS  
 CN 1H-Pyrrole-2,5-dione, 1,1'-[1,1':4,1'':4'',1'''-terphenyl]-4,4''-diyl)bis-,  
 homopolymer (9C1) (CA INDEX NAME)

CN 1

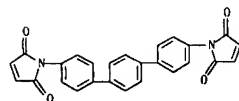
CRN 153176-31-9  
 CMT C26 H16 N2 O4



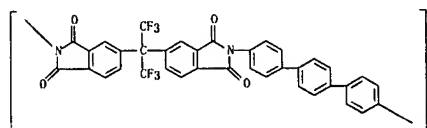
L5 ANSWER 113 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
 IT 153176-27-3P 153176-31-9P  
 RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process) (preparation and polymerization of)  
 RN 153176-27-3 CAPLUS  
 CN 1H-Pyrrole-2,5-dione, 1,1'-([1,1':4',1''-terphenyl]-2',4,4''-triyli)tris- (9C1) (CA INDEX NAME)



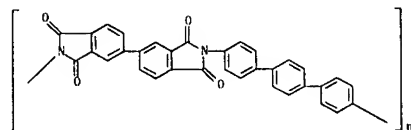
RN 153176-31-9 CAPLUS  
 CN 1H-Pyrrole-2,5-dione, 1,1'-([1,1':4',1''-terphenyl]-4,4''-diyl)bis- (9C1) (CA INDEX NAME)



L5 ANSWER 114 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1994:299799 CAPLUS  
 DN 120:299799  
 TI Calculation of refractive indices of polyimides and their molecular packing  
 AU Ando, Shinji  
 CS NTT Interdiscip. Res. Lab., Musashino, 180, Japan  
 SO Kobunshi Ronbunshu (1994), 51(4), 251-7  
 CODEN: KBRBA3; ISSN: 0386-2186  
 DT Journal  
 LA Japanese  
 AB Refractive indexes at 589.3 nm of 19 polyimides were measured using an Abbe refractometer and calculated from their Van der Waals vols. and mol. polarizabilities. The calculated refractive index when the packing coefficient was assumed to be 0.681 shows a linear relationship with the measured index (n) with a square correlation coefficient of 0.909. However, the slope considerably deviates from 1.0, which indicates that the mol. packing of polyimides changes according to their mol. structure. Packing coeffs. (Kp) of polyimides are estimated by comparing n with calculated parameter \*0. The mol. chains of the polyimides with high n are densely packed, and a planar structure of pyromellitic dianhydrides or other linkages lead to high Kp. In contrast, the mol. chains of polyimides with low n are loosely packed, and trifluoromethyl groups cause a decrease of interchain interaction and an intra-chain steric hindrance that inhibits mol. packing.  
 IT 113245-49-1  
 RL: PRP (Properties)  
 (Van der Waals volume and mol. polarizabilities and refractive indexes of, calcul. and measuring of)  
 RN 113245-49-1 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene](1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[1,1':4',1''-terphenyl]-4,4''-diyl] (9C1) (CA INDEX NAME)



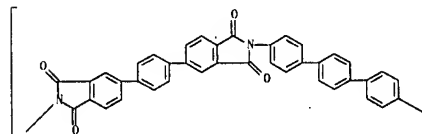
L5 ANSWER 115 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1994:218712 CAPLUS  
 DN 120:218712  
 TI Rodlike fluorinated and nonfluorinated polyimides based on 4,4'-diamino-p-terphenyl  
 AU Auman, Brian C.  
 CS E. I. Du Pont de Nemours and Co. Inc., Wilmington, DE, 19880-0336, USA  
 SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1993), 34(1), 443-4  
 CODEN: ACPPAY; ISSN: 0032-3934  
 DT Journal  
 LA English  
 AB Rigid, rodlike fluorine-containing and nonfluorinated polyimides based on 4,4'-diamino-p-terphenyl were prepared that had very low coeffs. of thermal expansion, low moisture absorption, and low dielec. consta. The nonfluorinated polyimides had lower moisture absorption than the fluorinated polyimides, which was proposed to be due to a free volume effect. The thermal stabilities of these polyimides was high, with 5% weight loss of all samples being close to 500° or higher; and the glass transition temps. were also very high because of the very stiff structures. The mol. wts. of the intermediate polyamic acids were characterized by gel permeation chromatog.  
 IT 26402-03-9P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and properties of)  
 RN 26402-03-9 CAPLUS  
 CN Poly[(1,1':3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)[1,1':4',1''-terphenyl]-4,4''-diyl] (9C1) (CA INDEX NAME)



L5 ANSWER 116 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1994:135440 CAPLUS  
 DN 120:135440  
 TI Preparation of polyimide precursors and polyimides manufactured therefrom  
 IN Togawa, Hideo; Shoji, Fusaji; Kataoka, Fumio; Sato, Tonobu  
 PA Hitachi Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 15 pp.  
 CODEN: JRXKAF  
 DT Patent  
 LA Japanese  
 FAN, CNT 2  

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 05132554	A	19930528	JP 1990-279072	19901019 <=
US 5272247	A	19931221	US 1991-779986	19911021 <=
JP 1990-279072	A	19901019		
JP 1991-225634	A	19910905		

AB The title precursors, useful for manufacture of polyimides with good heat resistance and low dielec. constant, are prepared by polycondensation of terphenyltetracarboxylic acid dianhydrides with aromatic diamines. Thus, heating bis[4-(4-aminophenyl)phenyl] ether 0.0074, p-diaminoterphenyl 0.0074, and p-terphenyl-3,3',4,4'-tetracarboxylic acid dianhydride 0.0148 mol in 1:1 AcNMe2-N-methylpyrrolidone mixture at 60-70° for 5 h gave a varnish having viscosity 50 P, which was applied on a Si wafer, and heated 30 min at 200° and 350°, resp. to give a film having Young's modulus 420 kg/cm<sup>2</sup>, glass temperature 400°, 3%-weight loss temperature 550°, and dielec. constant (10 kHz, 25°) 2.7.  
 IT 147862-81-5P  
 RL: PREP (Preparation)  
 (preparation of, films, with low dielec. constant, heat-resistant)  
 RN 147862-81-5 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)-1,4-phenylene(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[1,1':4',1''-terphenyl]-4,4''-diyl] (9C1) (CA INDEX NAME)



PAGE 1-A

L5 ANSWER 116 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-B

L5 ANSWER 117 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1994:56662 CAPLUS

DN 120:56662

TI A new class of laser dyes from acridinedione derivatives

AU Shanmugasundaram, Palanisamy; Prabakar, K. Joseph; Ramakrishnan, Vayalakkavoor T.

CS Dep. Org. Chem., Univ. Madras, Madras, 600 025, India

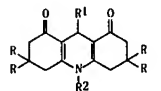
SO Journal of Heterocyclic Chemistry (1993), 30(4), 1003-7

CODEN: JHTCAD; ISSN: 0022-152X

DT Journal

LA English

GI



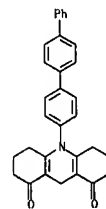
AB The synthesis of 1 (R = H, Me; R1 = H, Me, Pr, Ph, 2-ClC6H4, PhCH2; R2 = Ph, 4-MeC6H4, 4-ClC6H4, 4-MeOC6H4, 4-Me2NC6H4, 2,6-ClMeC6H3, 4-O2NC6H4, 2,4,6-Me2BrC6H3, u-naphthyl, p-terphenyl, 2-MeC6H4, 2-ClC6H4) as a new class of laser dyes is reported. These dyes laser around 475-495 nm and are compared to the standard dye Coumarin 102.

IT

RL: SPN (Synthetic preparation); PREP (Preparation)  
(laser dye, preparation and lasing properties of)

RN 152129-21-0 CAPLUS

CN 1,8(2H,5H)-Acridinedione, 3,4,6,7,9,10-hexahydro-10-[1,1':4',1''-terphenyl]-4-yl- (9C1) (CA INDEX NAME)



L5 ANSWER 118 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1994:56370 CAPLUS

DN 120:56370

TI Polyimides for interlayer insulation films, their precursors, and circuit

structures

IN Togawa, Hideo; Shoji, Fusa; Kato, Fumio

PA Hitachi Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JXXXXF

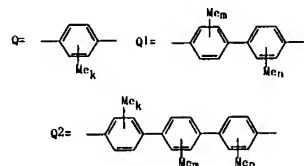
DT Patent

LA Japanese

FAN, CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05230213	A	19930907	JP 1992-33150	19920220 <--
JP 3079740	R2	20000821		
US 5536584	A	19960716	US 1993-11493	19930129 <--
PRAI JP 1992-16670	A	19920131		
JP 1992-33150	A	19920220		

GI



AB Polyamic acids containing repeating units NHCOR1(CO2H)2CONHR2 (R1 = organic group; R2 = Q, Q1, Q2; k, m, n = 0-4; z of k, m, n is not 0), polyimides prepared by thermal dehydration of the polyamic acids, and circuit structures using the polyimides in interlayer insulating films are claimed. Thus, treating 13.0 g 3,3'-dimethyl-4,4'-diaminobiphenyl with 18.02 g biphenyl-3,3',4,4'-tetracarboxylic dianhydride in AcNMe2-N-methyl-2-pyrrolidone mixture at 55-65° gave a polyamic acid varnish, which was applied on a glass wafer and heated at 200° for 30 min and at 350° for 30 min to give a polyimide film showing sp. dielec. constant 2.8, glass transition temperature >400°, and thermal expansion coefficient 7 ppm/°C. A multilayered printed circuit board was manufactured using the polyimide as the interlayer insulating film, in which the insulating layer was ashed under 0 at 0.5 torr. No cracks nor interlayer peeling was observed

IT 152196-93-5P

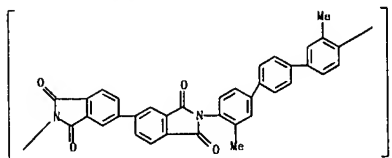
RL: PREP (Preparation)  
(preparation of, as interlayer insulating films for multilayered printed circuit boards)

RN 152196-93-5 CAPLUS

CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isindole]-2,2'-diyl)(3,3'-dimethyl[1,1':4',1''-terphenyl]-4,4'-diyl)] (9C1) (CA INDEX NAME)

L5 ANSWER 118 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

(Continued)



L5 ANSWER 119 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1993:650764 CAPLUS

DN 119:250764

TI Macromonomers having reactive end groups

IN Gagne, Robert R.; Marrocco, Matthew Louis, III; Trimmer, Mark Steven;

Hendricks, Neil H.

PA Maxden Inc., USA

SO PCT Int. Appl., 100 pp.

COEN: PIXX02

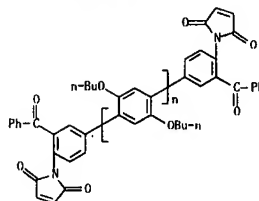
DT Patent

LA English

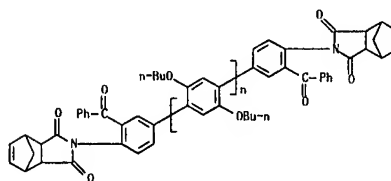
FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9304099	A1	19930304	WO 1992-US5889	19920714 <--
W: CA, JP, KR				
RW: AT, RE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
US 5373056	A	19941213	US 1991-746917	19910819 <--
CA 2115143	C	20021119	CA 1992-2115143	19920214 <--
EP 599886	A1	19940508	EP 1992-916566	19920714 <--
EP 599886	B1	20010321		
R: DE, FR, GB, IT, NL				
JP 06510315	T	19941117	JP 1993-504293	19920714 <--
JP 3245163	B2	20020107		
US 5670564	A	19970923	US 1995-457092	19950601 <--
US 5824744	A	19981020	US 1995-457268	19950601 <--
US 5827927	A	19981027	US 1996-645914	19960514 <--
US 5873075	A	19991026	US 1998-93746	19980608 <--
PRAI US 1991-746917	A	19910819		
WO 1992-US5889	W	19920714		
US 1994-331144	H3	19941027		
US 1995-457268	A3	19950601		
AB Rigid-rod macromonomers having a polyarom. backbone, solubilizing side groups, and reactive end groups are prepared and chemical incorporated into polymer systems to provide strong, stiffened polymers. Thus, stirring 6.94 mmol 2,5-dichloro-4-methylbenzophenone and 1.88 mmol Me 3-chlorobenzoate with bis(triphenylphosphine)nickel(II) chloride 0.77, PPh3 1.53, NaI 1.17, and activated Zn powder 15.3 mmol in N-methylpyrrolidone at 50° for 18 h gave a macromonomer with weight-average mol. weight 14,000 and polydispersity 1.4.				
IT 151172-65-6P 151172-66-6P				
RI: PREP (Preparation)				
(macromonomer, preparation and polymerization of, for manufacture of stiffened thermoplastics)				
RN 151172-65-6 CAPLUS				
CN Poly(2,5-dibutoxy-1,4-phenylene), $\alpha,\omega$ -bis[3-benzoyl-4-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)phenyl]- (9C1) (CA INDEX NAME)				

L5 ANSWER 119 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 151172-66-6 CAPLUS  
CN Poly(2,5-dibutoxy-1,4-phenylene),  $\alpha,\omega$ -bis[3-benzoyl-4-(1,3,3a,4,7,7a-hexahydro-1,3-dioxo-4,7-methano-2H-isoindol-2-yl)phenyl]- (9C1) (CA INDEX NAME)



L5 ANSWER 120 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1993:482826 CAPLUS

DN 119:82826

TI Electrophotographic photosensitive member and electrophotographic

apparatus, device unit and facsimile machine using the same

IN Maruyama, Akio; Kikuchi, Toshihiro; Amamiya, Shoji; Nagahara, Shin; Aoki,

Katsumi; Tsuji, Haruyuki

PA Canon K. K., Japan

SO Eur. Pat. Appl., 67 pp.

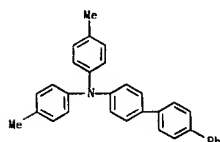
COEN: EPXNDW

DT Patent

LA English

FAN, CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 504794	A1	19920923	EP 1992-104575	19920317 <--
EP 504794	B1	19980603		
R: DE, FR, GB				
PRAI JP 1991-77290	A	19910318		
JP 1991-77291	A	19910318		
JP 1991-77292	A	19910318		
OS MARPAT 119-82826				
AB The title material comprises a conductive support, a photosensitive layer and a protective layer, the protective layer containing resin formed by hardening a light-setting type acrylic monomer, and the photosensitive layer containing 2) compound selected from the group consisting of (A), (B) and (C) below: (A) styryl comds. having a structure Ar1Ar2Ar3(CR2)2nR1 and a m.p. $\leq 150^\circ$ ; [Ar1 and Ar2 are aromatic ring groups, Ar3 is a bivalent aromatic ring group or a bivalent heterocyclic group, R1 is an alkyl group or an aromatic ring group, and n is 1 or 2, R1 and R2 possibly linking to form a ring when n = 1]; (B) triarylamine comds. having a structure Ar4Ar5Ar6 and a m.p. $\leq 150^\circ$ [Ar4, Ar5 and Ar6 are each an aromatic ring group or a heterocyclic group]; (C) hydrazone comds. having a structure A(C(R3)2NNR4R5)n [R3 is a H atom or an alkyl group, R4 and R5 are alkyl groups, aralkyl groups or aromatic ring groups, n is 1 or 2, A is an aromatic ring group, a heterocyclic group, or -CH=CR6R7 (R6 and R7 are H atoms, aromatic ring groups or heterocyclic groups, but will never be H atoms at the same time). The photosensitive member suppresses the occurrence of cracks during forming of the protective layer, has high durability, and is free from any image defects.				
IT 130965-29-6				
RI: USES (Uses)				
(electrophotographic plate with protective layer containing, for crack reduction)				
RN 130965-29-6 CAPLUS				
CN [1,1':4',1''-Terphenyl]-4-amine, N,N-bis(4-methylphenyl)- (9C1) (CA INDEX NAME)				



L5 ANSWER 121 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1993:450151 CAPLUS

DN 119:50151

TI Heat-resistant polyimides with low moisture absorption and dielectric

constant

IN Okada, Yoshifumi

PA Kanegafuchi Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

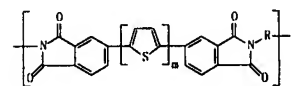
COEN: JRXKAF

DT Patent

LA Japanese

FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 04306233	A	19921029	JP 1991-98172	19910402 <--
JP 2729708	R2	19980318		
PRAI JP 1991-98172		19910402		
G1				



AB Title polyimides has thiophene-containing structural units I (R = bivalent organic residue; m = 1-3). Thus, equimol. 2,2-bis[4-(4-aminophenoxy)phenyl]hexafluoropropane and 2,5-bis(3,4-dicarboxyphenyl)thiophene dianhydride were mixed for 1 h at .apprx. 0° in DMF to obtain a solution, which was cast on a glass plate, dried at .apprx. 100° for .apprx. 60 min, and then the formed polyamic acid film was heated at 100-300° for .apprx. 150 min to obtain a 25- $\mu$ m polyimide film showing water absorption 0.2%, dielec. constant 2.5, and coefficient of thermal expansion  $2.2 \times 10^{-2}/^\circ\text{C}$ .

IT 148627-22-9P

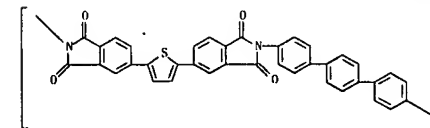
RI: PREP (Preparation)

(preparation of, heat-resistant, with low moisture absorption and dielec. constant)

RN 148627-22-9 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindolo-2,5-diyl)-2,5-thiophenediyl] (1,3-dihydro-1,3-dioxo-2H-isoindolo-5,2-diyl)[1,1':4',1''-terphenyl]-4,4'-diyl (9C1) (CA INDEX NAME)

PAGE 1-A



L5 ANSWER 121 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-B

L5 ANSWER 122 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1993:410094 CAPLUS

UN 119:10094

TI Low-viscosity blocked isocyanate-tetracarboxylic acid dianhydride varnishes and their use as interlayer electrical insulators in semiconductor device manufacture

IN Shimanogi, Hisao; Miwa, Takao; Okabe, Yoshiaki; Numata, Shunichi; Ikeda, Takao; Fujisaki, Koji; Tawata, Rio

PA Hitachi, Ltd., Japan; Hitachi Chemical Co., Ltd.

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN: CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 04283234	A	19921008	JP 1991-44621	19910311 <-
PRAI JP 1991-44621		19910311		

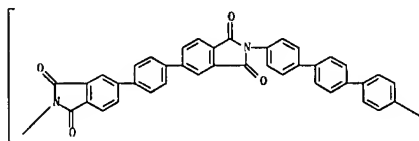
AB The varnishes, having viscosity 50.1 P, are prepared from aromatic tetracarboxylic acid dianhydrides and blocked isocyanates PhO<sub>2</sub>CN(CH<sub>2</sub>)<sub>2</sub>NCO<sub>2</sub>Ph (1: 2 = divalent organic group) in equimolar ratio. Thus, a varnish (viscosity 0.05 P), prepared by reacting 1 (Z = p-C<sub>6</sub>H<sub>4</sub>) with pyromellitic dianhydride in N-methylpyrrolidone, was made into a film having dielec. constant 3.5, 3%-weight-loss temperature 480°, and good flatness.

IT 147862-81-5  
RL: USES (Uses)  
(interlayer elec. insulating films, for semiconductor devices, flat, heat-resistant)

RN 147862-81-5 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)-1,4-phenylene(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[1,1':4',1''-terphenyl]-4,4''-diyl] (9C1) (CA INDEX NAME)

PAGE 1-A



L5 ANSWER 122 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-B

L5 ANSWER 123 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1993:263336 CAPLUS

DN 118:263336

TI Theoretical study of the nonlinear optical second-order susceptibilities of (CH<sub>3</sub>)<sub>2</sub>N(C<sub>6</sub>H<sub>4</sub>)<sub>n</sub>CN series molecules

AU Yu, Hongshi; Feng, Jikang; Li, Jun; Li, Zhiru

CS Dep. Chem., Jilin Univ., Changchun, 130023, Peop. Rep. China

SO Huaxue Xuebao (1993), 51(4), 334-40

CODEN: HHBP44; ISSN: 0567-7351

DT Journal

LA Chinese

AB Based on AM1 and INDO/CI methods, using the program for calcs. of the nonlinear optical second-order susceptibilities (β<sub>ijk</sub>), (β<sub>ijk</sub>) and (β<sub>ω</sub>) were calculated for (CH<sub>3</sub>)<sub>2</sub>N(C<sub>6</sub>H<sub>4</sub>)<sub>n</sub>CN series mols., n = 1 + 6. A systematic study is reported of the effect of conjugation length on the mol. nonlinear optical second-order susceptibilities and investigated the laser frequency dependences (dispersions) of (β<sub>ω</sub>) are discussed.

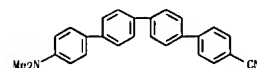
IT 130447-14-2 147951-61-9 147951-62-0

RL: PHP (Properties)

(nonlinear second-order susceptibility of, calcs. for)

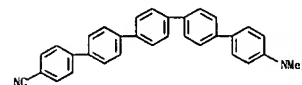
RN 130447-14-2 CAPLUS

CN [1,1':4',1'':4'',1''':4''',1''''-Quaterphenyl]-4-carbonitrile, 4''''-(dimethylamino)- (9C1) (CA INDEX NAME)



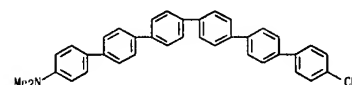
RN 147951-61-9 CAPLUS

CN [1,1':4',1'':4'',1''':4''',1''''-Quaterphenyl]-4-carbonitrile, 4''''-(dimethylamino)- (9C1) (CA INDEX NAME)



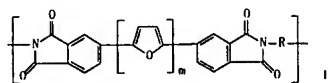
RN 147951-62-0 CAPLUS

CN [1,1':4',1'':4'',1''':4''',1''''-Sextiphenyl]-4-carbonitrile, 4''''-(dimethylamino)- (9C1) (CA INDEX NAME)



L5 ANSWER 124 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1993:192534 CAPLUS  
 DN 118:192534  
 TI Heat-resistant polyimide with reduced hygroscopicity and dielectricity  
 IN Okada, Yoshifumi  
 PA Kanegafuchi Chemical Industry Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN CNY 1

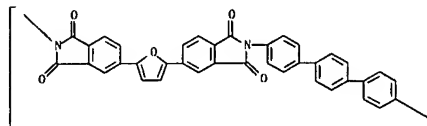
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 04306234	A	19921029	JP 1991-98173	19910402 <--
JP 2724424	B2	19980309		
PRAI JP 1991-98173		19910402		
GI				



AB Title polyimides have furan-containing structural units I (R = bivalent organic residue; m = 1-3). Thus, equimol. 2,2-bis[4-(4-aminophenoxy)phenyl]hexafluoropropane and 2,5-bis(phthalic anhydrido-3-furan were mixed for 1 h at approx. 0° in DMF to obtain a solution, which was cast on a glass plate, dried at approx. 100° for approx. 60 min, and then the formed polyimide acid film was treated at 100-300° for approx. 150 min to obtain a 25-μm polyimide film showing water absorption 0.2% (ASTM D570), dielec. constant 2.5, and coefficient of thermal expansion  $2.3 \times 10^{-2}\%$ .

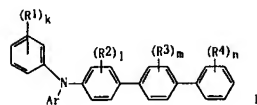
IT 147187-05-1P  
 RL: PREP (Preparation)  
 (preparation of, heat-resistant, with reduced hygroscopicity and low dielectricity)  
 RN 147187-05-1 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)-2,5-furandiyl] (1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[1,1':4',1''-terphenyl]-4,4'-diyl (9C1) (CA INDEX NAME)

PAGE 1-A



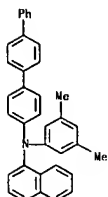
L5 ANSWER 125 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1993:157808 CAPLUS  
 DN 118:157808  
 TI Electrophotographic photoreceptor  
 IN Morishita, Yoshii; Sugimoto, Yasushi; Hayashida, Shigeru; Ishikawa, Hiroko  
 PA Hitachi Chemical Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN CNY 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 04276760	A	19921001	JP 1991-38350	19910305 <--
PRAI JP 1991-38350		19910305		
GI				



AB The title photoreceptor contains a naphthylamine compound represented by I. For I, Ar = (substituted) naphthyl ring; R1, R4 = H, halo, (substituted) alkyl, alkoxy, etc.; R2, R3 = H, halo, (substituted) alkyl, alkoxy; k, n = 1 to 5; l, m = 1 to 4. The title photoreceptor shows high sensitivity.

IT 146133-67-7  
 RL: USES (Uses)  
 (electrophotog. photoreceptor containing)  
 RN 146133-67-7 CAPLUS  
 CN 1-Naphthalenamine, N-(3,5-dimethylphenyl)-N-[1,1':4',1''-terphenyl]-4-yl- (9C1) (CA INDEX NAME)



L5 ANSWER 124 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
 PAGE 1-B

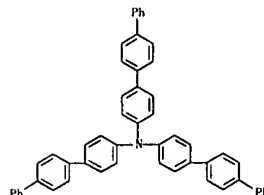
118:192534

L5 ANSWER 126 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1993:101258 CAPLUS  
 DN 118:101258  
 TI Tris(biphenyl-4-yl)amine and tris(p-terphenyl-4-yl)amine as a novel class of molecules for amorphous molecular materials  
 AU Higuchi, Akihi; Ohnishi, Katsuei; Nomura, Satoyuki; Inada, Hiroshi; Shiota, Yasuhiko  
 CS Fac. Eng., Osaka Univ., Suita, 565, Japan  
 SO Journal of Materials Chemistry (1992), 2(10), 1109-10  
 CODEN: JMACEP; ISSN: 0959-9428  
 DT Journal  
 LA English  
 OS CASREACT 118:101258  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Starburst precursor mols. based on π-electron systems, R3N [R = biphenyl-4-yl (I), p-terphenyl-4-yl (II)] constitute a new class of amorphous mol. materials with relatively high glass-transition temps. of 76 and 132°, resp.

IT 145693-79-4P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and glass-transition temperature of)  
 RN 145693-79-4 CAPLUS  
 CN [1,1':4',1''-Terphenyl]-4-amine, N,N-bis([1,1':4',1''-terphenyl]-4-yl)- (9C1) (CA INDEX NAME)



L5 ANSWER 127 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1993:90270 CAPLUS  
 DN 118:90270  
 TI Organic electroluminescent device  
 IN Sato, Yoshiharu; Otsuka, Shigenori  
 PA Mitsubishi Kasei Corp., Japan  
 SO Eur. Pat. Appl., 18 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN: CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 510541	A1	19921028	EP 1992-106677	19920416 <-
EP 510541	B1	19951227		
R: DE, FR, GB, NL				
JP 04320484	A	19921111	JP 1991-88444	19910419 <-
JP 2998268	B2	20000111		
US 5247226	A	19930921	US 1992-870310	19920417 <-
PRA1 JP 1991-88444	A	19910419		

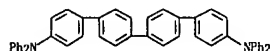
OS WARPAT 118:90270

AB Electroluminescent devices comprising an anode, an organic hole injection transport layer, an organic luminescent layer, and a cathode are described in which the hole injection transport layer contains a metal complex and/or a metal salt of an aromatic carboxylic acid.

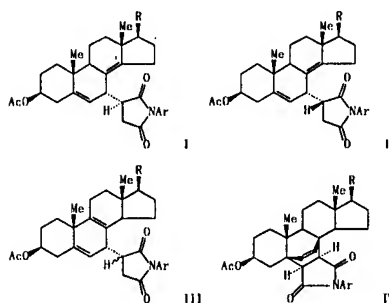
IT 145898-89-1  
 RL: PRP (Properties)  
 (electroluminescent devices with metal salt-containing hole injection layers containing)

RN 145898-89-1 CAPLUS

CN [1,1':4',1'':4'',1''':4'''-Quaterphenyl]-4,4'''-diamino, N4,N4''',N4'''-tetraphenyl- (CA INDEX NAME)



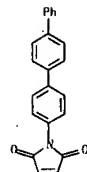
L5 ANSWER 128 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1993:59961 CAPLUS  
 DN 118:59961  
 TI Competitive Diels-Alder and ene addition of N-arylmaleimides to 7-dehydrocholesteryl acetate  
 AU Leigh, William J.; Hughes, Donald W.; Mitchell, D. Scott  
 CS Dep. Chem., McMaster Univ., Hamilton, ON, L8S 4M1, Can.  
 SO Canadian Journal of Chemistry (1992), 70(11), 2730-44  
 CODEN: CJCHAG; ISSN: 0008-4042  
 DT Journal  
 LA English  
 GI



AB Thermolysis of N-phenyl-, N-para-biphenyl-, and N-para,para'-terphenylmaleimide with 7-dehydrocholesteryl acetate in benzene solution at 200° yields mixts. of four cycloadducts I (R = C6H17, Ar = Ph, p-biphenyl, p,p'-terphenyl), II (R, Ar as above), III (R, Ar as above), and IV (R, Ar as above) in relative yields that are essentially independent of the maleimide substituent. The three major products I-III are those of ene addition to C7 of the steroid with abstraction of the proton at C3 or C14. The *endo*-Diels-Alder adduct IV is formed as a minor product. The structure of the adducts have been elucidated on the basis of one- and two-dimensional 1H- and 13C-NMR spectroscopic techniques, including homonuclear 1H decoupling, NOE, 1H-1H COSY, heteronuclear 1H-13C shift correlation, and TOCSY 2-D expts., and the results of mol. mechanics (MMX) calcs. The combination of these techniques has made it possible to almost completely assign the 1H and 13C NMR spectra of two of the ene adducts I and II and the Diels-Alder adduct from reaction of 7-dehydrocholesteryl acetate with N-phenylmaleimide.

IT 141171-23-5  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (competitive ene and Diels-Alder reaction of, with dehydrocholesteryl acetate)

L5 ANSWER 128 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
 RN 141171-23-5 CAPLUS  
 CN 1H-Pyrrole-2,5-dione, 1-[1,1':4',1'':4''-terphenyl]-4-yl- (9C1) (CA INDEX NAME)

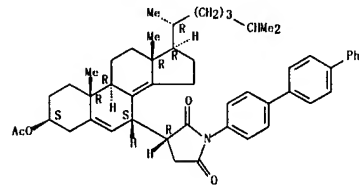


IT 141171-24-6P 141171-26-8P 141171-28-OP  
 141171-30-4P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

RN 141171-24-6 CAPLUS

CN 2,5-Pyrrolidinedione, 3-[(3R,7a)-3-(acetyloxy)cholesta-5,8(14)-dien-7-yl]-1-[1,1':4',1'':4''-terphenyl]-4-yl-, (R)- (9C1) (CA INDEX NAME)

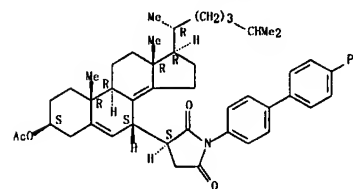
Absolute stereochemistry.



RN 141171-26-8 CAPLUS  
 CN 2,5-Pyrrolidinedione, 3-[(3R,7a)-3-(acetyloxy)cholesta-5,8(14)-dien-7-yl]-1-[1,1':4',1'':4''-terphenyl]-4-yl-, (S)- (9C1) (CA INDEX NAME)

Absolute stereochemistry.

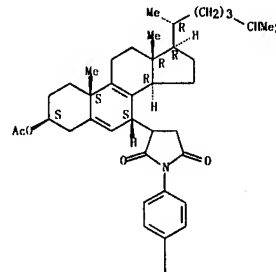
L5 ANSWER 128 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 141171-28-0 CAPLUS  
 CN 2,5-Pyrrolidinedione, 3-[(3R,7a)-3-(acetyloxy)cholesta-5,8-dien-7-yl]-1-[1,1':4',1'':4''-terphenyl]-4-yl- (9C1) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



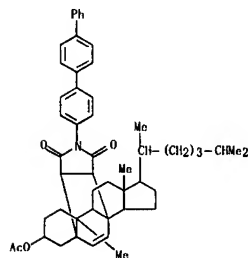
PAGE 2-A



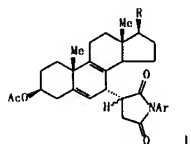
RN 141171-30-4 CAPLUS  
 CN 1H,4H-3b,12b-Ethenobenz[e]indeno[5,4-g]isoindole-1,3(2H)-dione, 5-(acetyloxy)-10-(1,5-dimethylhexyl)-3a,5,6,7,7a,7b,8,9,9a,10,11,12,12a,12c-tetradecahydro-7a,8a-dimethyl-2-[1,1':4',1'':4''-terphenyl]-4-yl-,



L5 ANSWER 128 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
AN 1992:408265 CAPLUS  
DN 117:8265  
TI Organic reactions in liquid-crystalline solvents. Regiochemical control of bimolecular pericyclic reactions by cholesteric and smectic liquid-crystalline solvents



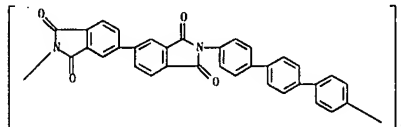
AU Leigh, William J.; Mitchell, D. Scott  
CS Dep. Chem., McMaster Univ., Hamilton, ON, L8S 4M1, Can.  
SO Journal of the American Chemical Society (1992), 114(13), 5005-10  
CODEN: JACSAT; ISSN: 0002-7863  
DT Journal  
LA English  
OS CASREACT 117:8265  
GI



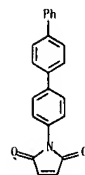
AB The cycloaddn. reactions of N-Ph, N-para-biphenyl, and N-para,para'-terphenylmaleimide with 7-dehydrocholesteryl acetate have been carried out in the isotropic and cholesteric liquid crystalline phases of a series of steroidal mesogens, and in the isotropic, smectic A, and smectic B phases of 4,4'-dialkylbiphenyl mesogens at temps. between 180 and 240°. In isotropic solvents, mixts. of four cycloadducts are obtained, in relative yields that are essentially independent of the maleimide substituent. The three major products (two ene-adducts and one Diels-Alder adduct) are formed via transition states in which the long mol. axes of the reactants are oriented perpendicular to one another, while the fourth (minor) product is an ene-adduct formed via a transition state with a parallel relative orientation of the reactants' long mol. axes. The relative yield of the latter product is enhanced when the reaction is carried out in cholesteric or smectic liquid crystalline solvents, to an extent which correlates with both the degree of order possessed by the liquid crystal and the mol. length of the N-aryl maleimide employed. For example, this adduct [1: R = CHH17; Ar = (p-CH4)2Ph] is the major product of reaction of N-p,p'-terphenylmaleimide with 7-dehydrocholesteryl acetate in the cholesteric phase of cholesteryl p-chlorobenzoate at 200°. Studies of the temperature dependence of the product distributions afford estimates of the difference in enthalpy and entropy between parallel and perpendicular transition states in the cholesteric phase. The effect of the smectic B phase on the activation parameters appears to be smaller than that of the cholesteric phase; it is suggested that this is due to poor solubility of the reactants in the smectic phase, which leads to complex variations in reactant solubilization and reactivity as a function of temperature. The smectic A phase of this mesogen exerts much greater control on reactivity than the cholesteric phases at 240°.

IT 141171-23-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(cycloaddn. and ene reactions of, with dehydrocholesteryl acetate in liquid-crystalline solvents, regiochem. of)  
RN 141171-23-5 CAPLUS  
CN III-Pyrrole-2,5-dione, 1-[1,1':4',1''-terphenyl]-4-yl- (9C1) (CA INDEX NAME)

L5 ANSWER 129 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1992:552016 CAPLUS  
DN 117:152016  
TI Mechanical properties and methods of preparation of high-modulus films from polyimide compositions  
AU Smirnova, V. E.; Bessonov, M. I.; Sklizkova, V. P.; Nekrasova, E. M.  
CS Inst. Vysokomol. Soedin., Russia  
SO Vysokomolekulyarnye Soedineniya, Seriya A (1991), 33(11), 2445-51  
CODEN: VYSAAF; ISSN: 0507-5475  
DT Journal  
LA Russian  
AB Comps. containing mixts. of polyamic acids based on benzenetetracarboxylic acid or biphenyltetracarboxylic acid and aromatic diamines or block polyamic acids were prepared, orientational stretching and thermocyclization were performed, and mech. properties of polyimide films were studied. The most high-modulus and high-oriented films were obtained from block polyamic acids with low content of rigid-chain fragments or with 2 different rigid chain fragments. The same type of comps. showed the highest selforientation during thermocyclization.  
IT 26402-03-9  
RL: FRP (Properties)  
(preparation of high-modulus films from)  
RN 26402-03-9 CAPLUS  
CN Poly[(1,1':3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-indole]-2,2'-diyl)[1,1':4',1''-terphenyl]-4,4''-diyl] (9C1) (CA INDEX NAME)

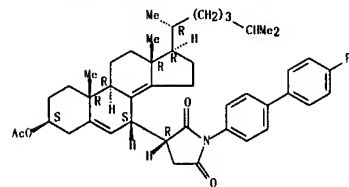


L5 ANSWER 130 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
NAME)



IT 141171-24-6P 141171-26-8P 141171-28-0P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 141171-24-6 CAPLUS  
CN 2,5-Pyrrolidinedione, 3-[(3R,7a)-3-(acetyloxy)cholesta-5,8(14)-dien-7-yl]-1-[1,1':4',1''-terphenyl]-4-yl-, (R)- (9C1) (CA INDEX NAME)

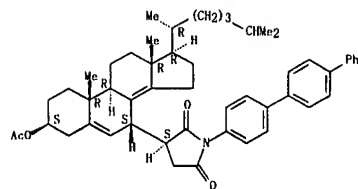
Absolute stereochemistry.



RN 141171-26-8 CAPLUS  
CN 2,5-Pyrrolidinedione, 3-[(3R,7a)-3-(acetyloxy)cholesta-5,8(14)-dien-7-yl]-1-[1,1':4',1''-terphenyl]-4-yl-, (S)- (9C1) (CA INDEX NAME)

Absolute stereochemistry.

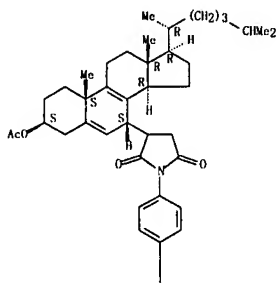
L5 ANSWER 130 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 141171-28-0 CAPLUS  
 CN 2,5-Pyrrolidinedione, 3-[(3R,7a)-3-(acetyloxy)cholesta-5,8-dien-7-yl]-1-[1,1':4',1''-terphenyl]-4-yl- (9C1) (CA INDEX NAME)

Absolute stereochemistry.

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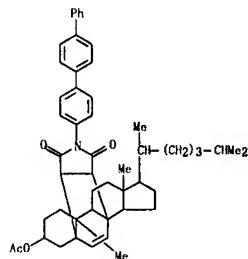


PAGE 2-A



L5 ANSWER 130 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 141171-30-4 CAPLUS  
 CN 1H, 4H-3b, 12b-Ethenobenz[a]indeno[5,4-g]isoindole-1,3(2H)-dione, 5-(acetyloxy)-10-[(1,5-dimethylhexyl)-3a,5,6,7,7a,7b,8,9,9a,10,11,12,12a,12c-tetradecahydro-7a,9a-dimethyl-2-[1,1':4',1''-terphenyl]-4-yl-, [3aR-[3aa,3bb,5b,7ab,7ba,9ab,10b(R\*),12aa,12bb,12ca]]- (9C1) (CA INDEX NAME)



L5 ANSWER 131 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1992:245397 CAPLUS  
 DN 116:245397  
 TI Liquid-crystal aligning-film composition  
 IN Kanbe, Sadao; Aoki, Nobuo; Ebisawa, Nakoto  
 PA Seiko Epson Corp., Japan; Japan Chitii Co., Ltd.  
 SO Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKKXAF

DT Patent  
 LA Japanese

FAN	CNT	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI		JP 03179323	A	19910805	JP 1989-329057	19891219 <—
PRAI		JP 1989-320235	A1	19891219		
		JP 1989-3243	A1	19890110		
		JP 1989-25079	A1	19890203		
		JP 1989-25080	A1	19890203		
		JP 1989-150085	A1	19890613		
		JP 1989-206550	A1	19890809		
		JP 1989-206883	A1	19890811		
		JP 1989-247564	A1	19890922		

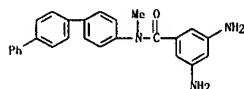
AB The title component contains a polyamic acid [NHCOR1(CO2H)2 CONHR2]<sub>n</sub> (R1 = aromatic or aliphatic ring; R2 = aromatic ring with side chain having alkyl, alkoxy, or halo, and/or cyclic substituent; n = integer). The film gives a high pretilt angle and is suited for use in supertwisted nematic liquid-crystal displays.

IT 136951-68-3  
 RI: USES (Uses)  
 (polyamic-acid aligning-film composition from, for liquid crystal display devices)

RN 136951-68-3 CAPLUS  
 CN Benzamide, 3,5-diamino-N-methyl-N-[1,1':4',1''-terphenyl]-4-yl-, polymer with 1H,3H-benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone (9C1) (CA INDEX NAME)

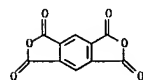
CN 1

CRN 136951-67-2  
 CMF C26 H23 N3 O



CN 2

CRN 89-32-7  
 CMF C10 H2 O6



L5 ANSWER 131 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

L5 ANSWER 132 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1992:195125 CAPLUS

DN 116:195125

TI Polyphenyldiamines and their use as polycondensation monomers in the synthesis of polyimides/polyamides poly(amide-imide), and polyimide polymers

IN Harris, Frank W.

PA University of Akron, USA

SD U.S., 12 pp.

CODEN: USXXAM

DT Patent

LA English

FAN CNT 1

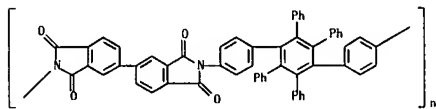
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5087691	A	19920211	US 1989-402272	19890901 <-
PRAI US 1989-402272		19890901		

AB The title diamines, e.g. 1,4-bis(4-aminophenyl)-2,3,5-triphenylbenzene (I), are prepared and polymerized to give polyamides, polyamide-polyimides and polyimides with good strength, solubility, elec. properties, and low coefficient of expansion. Thus, a polymer, prepared by polymerizing 0.4 g l with 0.1662 g terephthaloyl chloride in N-methylpyrrolidone (I), had inherent viscosity (in l at 30°) 2.87 dL/g, 5% weight loss temperature 493 and 508° in air and in N, resp.

IT 121265-82-5P 121265-83-6P 121265-84-7P

RN 121265-82-5 CAPLUS

CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isindole]-2,2'-diyl)(2',3',5',6'-tetraphenyl)[1,1':4',1''-terphenyl]-4,4''-diyl)-1,4-phenylene] (9C1) (CA INDEX NAME)



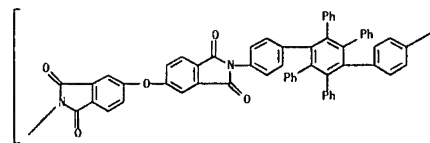
RN 121265-83-6 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isindole-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isindole-5,2-diyl)(2',3',5',6'-tetraphenyl)[1,1':4',1''-terphenyl]-4,4''-diyl)] (9C1) (CA INDEX NAME)

L5 ANSWER 132 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

(Continued)

PAGE 1-A



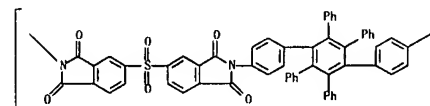
PAGE 1-B



RN 121265-84-7 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isindole-2,5-diyl)sulfonyl(1,3-dihydro-1,3-dioxo-2H-isindole-5,2-diyl)(2',3',5',6'-tetraphenyl)[1,1':4',1''-terphenyl]-4,4''-diyl)] (9C1) (CA INDEX NAME)

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L5 ANSWER 132 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

(Continued)

PAGE 1-B



L5 ANSWER 133 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1992:184580 CAPLUS

DN 116:184580

TI Electrophotographic photoconductors

IN Usuda, Minoru; Niimi, Tatsuya; Hashimoto, Mitsuru; Sasaki, Masao; Ariga, Tamotsu; Shimada, Tomoyuki

PA Ricoh Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 15 pp.

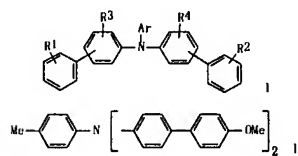
CODEN: JXXXXF

DT Patent

LA Japanese

FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 03249759	A	19911107	JP 1990-48945	19900228 <-
PRAI JP 2898085	B2	19990602		
GI JP 1990-48945		19900228		



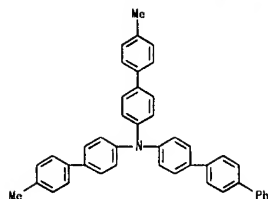
AB Pyrylium dyes, insulating polymers, and compds. I are contained in the title photoconductor (R1-2 = H, amino, dialkylamino, alkoxy, thioalkoxy, aryloxy, alkyl, halo, aryl; R3-4 = H, alkoxy, alkyl, halo; Ar = monocyclic aromatic hydrocarbyl, noncondensed polycyclic aromatic hydrocarbyl, heterocyclyl). The photoconductors have high sensitivity, especially when charged pos., and low residual voltage. Thus, an Al-coated PET film was coated with a layer containing 4-(4-dimethylaminophenyl)-2,6-diphenylthiopyrylium perchlorate, polycarbonate, and compound II showed the advantage.

IT 138796-77-7

RN 138796-77-7 CAPLUS

CN [(1,1':4',1''-terphenyl)-4-amine, N,N-bis(4'-methoxy[1,1'-biphenyl]-4-yl)- (9C1) (CA INDEX NAME)]

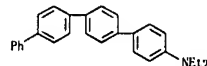
L5 ANSWER 133 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



L5 ANSWER 134 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

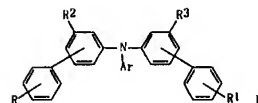
AN 1992:116756 CAPLUS  
 DN 116:116756  
 TI Oligophenylene thin film electroluminescence device  
 IN Nagai, Takeao; Namiki, Toru; Nakada, Hitoshi; Wakimoto, Takao; Murayama, Tatsufumi  
 PA Pioneer Electronic Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKKXAF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 03162484	A	19910712	JP 1989-301501	19891120 <-
PRA1 JP 1989-301501		19891120		
AB	The title device, capable of high-efficiency operation at a low voltage, comprises an oligophenylene derivative-containing thin-film luminescence layer, and a hole transport layer, sandwiched between a cathode and an anode.			
IT 139269-37-7	RL: USES (Uses)			
	(thin-film electroluminescent device)			
RN 139269-37-7	CAPLUS			
CN [1,1':4',1''-Terphenyl]-4-amine, N,N-diethyl- (9C1) (CA INDEX NAME)				

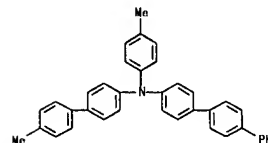


L5 ANSWER 135 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1992:95688 CAPLUS  
 DN 116:95688  
 TI Method for recovering electrophotographic photoreceptor fatigue  
 IN Niimi, Tatsuya; Umeda, Minoru; Sasaki, Masamichi; Ariga, Tamotsu; Shimada, Tomoyuki  
 PA Ricoh Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 42 pp.  
 CODEN: JKKXAF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 03118548	A	19910521	JP 1989-255567	19890930 <-
PRA1 JP 2881211	B2	19990412		
OS JP 1989-255567		19890930		
GI MARPAT 116:95688				

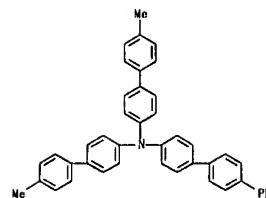


AB The title method comprises heat-treating the photoreceptor containing a charge-transport compound I (R, R1 = H, amino, dialkylamino, alkoxy, thioalkoxy, aryloxy, alkyl, halo, aryl; R2, R3 = H, alkoxy, alkyl, halo; Ar = single aromatic hydrocarbon, noncondensation-type multi-ring aromatic hydrocarbon, heterocyclyl) inside or outside of an image-forming apparatus  
 IT 138796-39-1 138796-77-7  
 RL: USES (Uses)  
 (electrophotog. photoreceptor containing, method for recovering fatigue of)  
 RN 138796-39-1, CAPLUS  
 CN [1,1':4',1''-Terphenyl]-4-amine, N-(4'-methyl[1,1'-biphenyl]-4-yl)-N-(4-methylphenyl)- (9C1) (CA INDEX NAME)



RN 138796-77-7, CAPLUS  
 CN [1,1':4',1''-Terphenyl]-4-amine, N-bis(4'-methyl[1,1'-biphenyl]-4-yl)- (9C1) (CA INDEX NAME)

L5 ANSWER 135 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

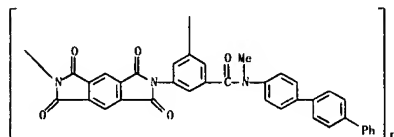


L5 ANSWER 136 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1991:633188 CAPLUS  
 DN 115:233188  
 TI Preparation of heat-resistant polyimides  
 IN Aoki, Nobuo; Ebisawa, Makoto  
 PA Japan Carlit Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKKXAF  
 DT Patent  
 LA Japanese  
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03121132	A	19910523	JP 1990-33713	19900216 <-
JP 1989-52514	A1	19890307		
JP 1989-126579	A1	19890522		
JP 1989-173066	A1	19890706		

AB Polyimides having good film-forming properties and useful for liquid crystal orientation films are prepared by polycondensation of tetracarboxylic acids with aromatic diamines bearing cyclic substituent pendant groups. Thus, reacting 5,4 parts cyclohexyloxy-1,4-phenylenediamine with 4.4 parts 3,3',4,4'-biphenyltetracarboxylic acid dianhydride in 118 parts AcNMe<sub>2</sub> at 20-30° for 24 h, coating the resulting solution on glass and heating at 250° for 1 h gave a film having decomposition temperature 353°.

IT 136919-52-3P 136951-68-3P  
 RL: PREP (Preparation)  
 RN 136919-52-3 CAPLUS  
 CN Poly[(5,7-dihydro-1,3,5,7-tetraoxobenz[1,2-c:4,5-c']dipyrrolo-2,6(1H,3H)-diyl)[5-[(methyl[1,1':4',1''-terphenyl]-4-ylamino)carbonyl]-1,3-phenylene]] (9C1) (CA INDEX NAME)

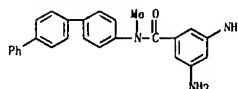


RN 136951-68-3 CAPLUS  
 CN Benzamide, 3,5-diamino-N-methyl-N-[(1,1':4',1''-terphenyl)-4-yl]-, polymer with 1H,3H-benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone (9C1) (CA INDEX NAME)

CN 1

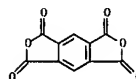
CRN 136951-67-2  
 CMF C26 H23 N3 O

L5 ANSWER 136 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



CM 2

CRN 89-32-7  
 CMF C10 H2 O6

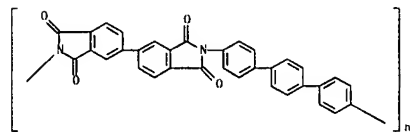


L5 ANSWER 137 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1991:546495 CAPLUS  
 DN 115:146495  
 TI The relationship between the physical properties of the alignment layer and the quality of SSFLC (surface stabilized ferroelectric liquid crystal) cells  
 AU Myrvold, Berni O.  
 CS Autodisplay A/S, Oslo, N-0314, Norway  
 SO Molecular Crystals and Liquid Crystals (1991), 202, 123-47  
 CODEN: MCLCAS; ISSN: 0026-8941  
 DT Journal  
 LA English  
 FAN CNT 1

AB Data on the quality of alignment for 130 different polymers, tested as alignment layers for surface stabilized ferroelec. liquid crystal displays (SSFLCs), are given. The thermal, mech. and elec. properties of the polymers are correlated with their ability to give good, bistable alignment in SSFLCs.

IT 26402-03-9  
 RL: PRP (Properties)  
 (properties of, for alignment layer of surface-stabilized ferroelec. liquid crystal cell)

RN 26402-03-9 CAPLUS  
 CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)[1,1':4',1''-terphenyl]-4,4''-diyl] (9C1) (CA INDEX NAME)



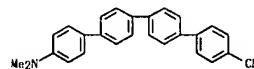
L5 ANSWER 138 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1991:502495 CAPLUS  
 DN 115:102495  
 TI Organic material for nonlinear optics and electrooptical devices  
 IN Fauvarque, Jean Francois; Jutand, Anny; Amatore, Christian; Negri, Serge  
 PA Alcatel N. V., Neth.  
 SO Eur. Pat. Appl., 11 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA French  
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 424829	A1	19910502	EP 1990-120132	19901019 <-
FR 2653908	A1	19910503	FR 1989-14062	19891026 <-
JP 03167533	A	19910719	JP 1990-285677	19901023 <-
PRA1 FR 1989-14062	A	19891026		

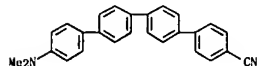
OS MARPAT 115:102495  
 AB The title material has the formula D(p-C6H4)nCN where D is an electron donor group, CN is electron-attractive group, and n = 3 or 4. The material is prepared by reacting D-n-C6H4-ZnCl with Br(p-C6H4)n-CN.

IT 130447-14-2P  
 RL: TEM (Technical or engineered material use); FORM (Formation, nonpreparative); PREP (Preparation); USES (Uses)  
 (preparation and use of, as nonlinear optical material)

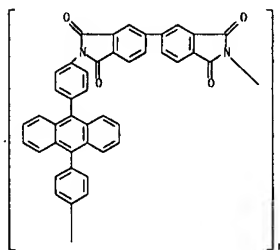
RN 130447-14-2 CAPLUS  
 CN [1,1':4',1''-4',1'''-Quaterphenyl]-4-carbonitrile, 4'''-(dimethylamino)- (9C1) (CA INDEX NAME)



LS ANSWER 139 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1991:153568 CAPLUS  
 DN 114:153568  
 T1 Nonlinear optical properties of asymmetric polyphenyls: efficiency versus transparency trade-off  
 AU Ledoux, Isabelle; Zyss, Joseph; Jutand, Anny; Amatore, Christian  
 CS Lab. Bagnoux, CNET, Bagnoux, 92220, Fr.  
 SO Chemical Physics (1991), 150(1), 117-23  
 CODEN: CHPM2; ISSN: 0301-0104  
 DT Journal  
 LA English  
 AB First-order hyperpolarizabilities  $\beta$  of a sequence of dimethylaminocyanopolyphenyl oligomers were measured by using the elec. field induced 2nd harmonic generation technique. High  $\beta$  values (up to  $55 \times 10^{-30}$  esu at zero frequency) are reported to be in-keeping with transparency in the visible and near UV spectral range. The behavior of  $\beta$  related to the number of Ph units was compared to calculated hyperpolarizabilities and discussed in terms of trade-off between intramol. charge transfer and the noncoplanarity between the benzene rings.  
 IT 130447-14-2  
 RL: PRP (Properties)  
 (nonlinear optical properties of)  
 RN 130447-14-2, CAPLUS  
 CN [1,1':4,1'':4'',1'''-Quaterphenyl]-4-carbonitrile, 4'''-(dimethylamino)-(9CI) (CA INDEX NAME)



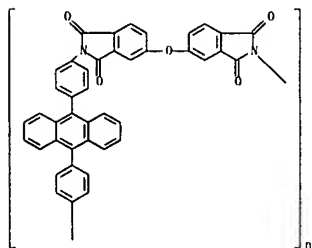
LS ANSWER 140 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1991:144439 CAPLUS  
 DN 114:144439  
 T1 Exciplex luminescence of anthracene-containing polyimides and its quenching in electric field  
 AU Kapustin, G. V.; Kotov, B. V.  
 CS Nauchno-Issled. Fiz.-Khim. Inst., Moscow, USSR  
 SO Doklady Akademii Nauk SSSR (1990), 315(4), 904-7 [Phys. Chem.]  
 CODEN: DAKWAS; ISSN: 0002-3264  
 DT Journal  
 LA Russian  
 AB Quenching of photoluminescence by elec. field was observed for aromatic. 9,10-bis(p-aminophenyl)anthracene-based polyimide films. The effect increased with increasing electron affinity of the diimide fragment in those films. The results were interpreted in terms of the mechanism of field quenching of exciplex fluorescence (Yokoyama, M.; et al., 1982). The findings confirm directly the exciplex nature of the excited luminescent states in polyimides and their role in photogeneration of charge carriers.  
 IT 106725-35-3 106725-36-4 133030-08-7  
 RL: PRP (Properties)  
 (exciplex luminescence and elec. field-induced luminescence quenching of)  
 RN 106725-35-3 CAPLUS  
 CN Poly[[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isindole]-2,2'-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9CI) (CA INDEX NAME)



RN 106725-36-4 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9CI) (CA INDEX NAME)

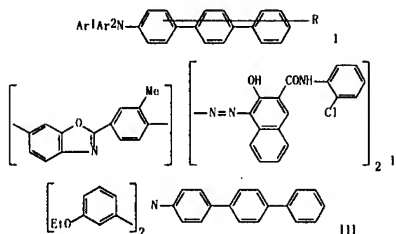
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

LS ANSWER 140 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
 \* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*  
 RN 133030-08-7 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isindole-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9CI) (CA INDEX NAME)



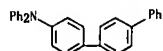
LS ANSWER 141 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1991:14920 CAPLUS  
 DN 114:14920  
 T1 Electrophotographic photoconductors  
 IN Kammaru, Tetsuo; Kikuchi, Norihiro; Senoo, Akihito; Yashiro, Ryoji  
 PA Canon K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKKXAF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02190862	A	19900726	JP 1989-11382	19890120 <--
PRAI JP 1989-11382		19890120		

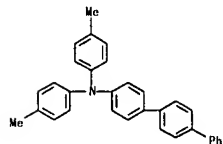


AB Photosensitive layer of the photoconductors contain p-terphenyl compds. I [Ari-2 = (substituted) Ph; R = H, halo, alkyl, alkoxy]. The use of I as charge carrier-transporting agent provides high sensitivity and stable performance. Thus, an Al sheet was coated with a charge-generating layer containing bisazo dye II and butyral resin, and a charge-transporting layer containing III and polycarbonate to obtain a photoconductor. This photoconductor was chargeable to -700 V, which decayed to 695 V after 1 s, when the sensitivity (exposure required for half decay of the voltage) 1.5 lx-s. Initial dark voltage and light voltage were -700 and -200 V, resp., which were -690 and -214 V, resp., after 5000 copies using the photoconductor.  
 IT 130965-28-5 130965-29-6 130965-30-9  
 130965-31-0 130965-32-1 130965-33-2  
 130965-34-3 130965-35-4 130965-36-5  
 130965-37-6 130965-38-7 130965-40-1  
 RL: USES (Uses)  
 (as charge-transporting agent, electrophotog. photoconductors containing)  
 RN 130965-28-5 CAPLUS  
 CN [1,1':4,1'':4'',1'''-Terphenyl]-4-amine, N,N-diphenyl- (9CI) (CA INDEX NAME)

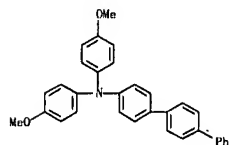
L5 ANSWER 141 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



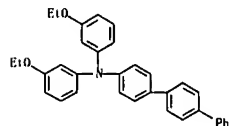
RN 130965-29-6 CAPLUS  
CN [1,1':4',1''-Terphenyl]-4-amine, N,N-bis(4-methylphenyl)- (9C1) (CA INDEX NAME)



RN 130965-30-9 CAPLUS  
CN [1,1':4',1''-Terphenyl]-4-amine, N,N-bis(4-methoxyphenyl)- (9C1) (CA INDEX NAME)

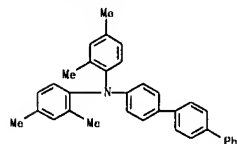


RN 130965-31-0 CAPLUS  
CN [1,1':4',1''-Terphenyl]-4-amine, N,N-bis(3-methoxyphenyl)- (9C1) (CA INDEX NAME)

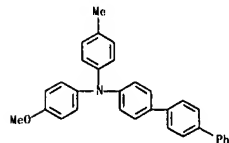


RN 130965-32-1 CAPLUS

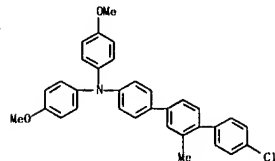
L5 ANSWER 141 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 130965-37-6 CAPLUS  
CN [1,1':4',1''-Terphenyl]-4-amine, N-(4-methoxyphenyl)-N-(4-methylphenyl)- (9C1) (CA INDEX NAME)

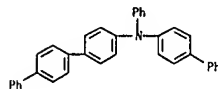


RN 130965-38-7 CAPLUS  
CN [1,1':4',1''-Terphenyl]-4-amine, 4'-chloro-N,N-bis(4-methoxyphenyl)-3'-methyl- (9C1) (CA INDEX NAME)

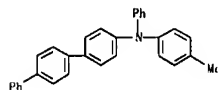


RN 130965-40-1 CAPLUS  
CN [1,1':4',1''-Terphenyl]-4-amine, N-(4-ethylphenyl)-N-(4-methylphenyl)- (9C1) (CA INDEX NAME)

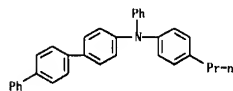
L5 ANSWER 141 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
CN [1,1':4',1''-Terphenyl]-4-amine, N-[1,1'-biphenyl]-4-yl-N-phenyl- (9C1) (CA INDEX NAME)



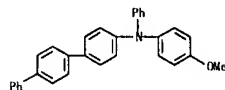
RN 130965-33-2 CAPLUS  
CN [1,1':4',1''-Terphenyl]-4-amine, N-(4-methylphenyl)-N-phenyl- (9C1) (CA INDEX NAME)



RN 130965-34-3 CAPLUS  
CN [1,1':4',1''-Terphenyl]-4-amine, N-phenyl-N-(4-propylphenyl)- (9C1) (CA INDEX NAME)

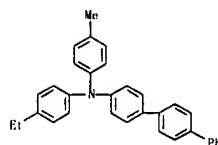


RN 130965-35-4 CAPLUS  
CN [1,1':4',1''-Terphenyl]-4-amine, N-(4-methoxyphenyl)-N-phenyl- (9C1) (CA INDEX NAME)

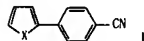


RN 130965-36-5 CAPLUS  
CN [1,1':4',1''-Terphenyl]-4-amine, N-bis(2,4-dimethylphenyl)- (9C1) (CA INDEX NAME)

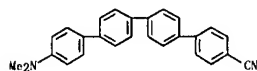
L5 ANSWER 141 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



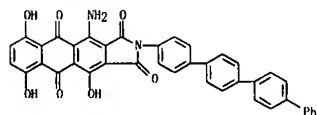
L5 ANSWER 142 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1990:611743 CAPLUS  
 DN 113:211743  
 TI Efficient palladium-catalyzed synthesis of unsymmetrical donor-acceptor  
 biaryls and polyaryls  
 AU Amatore, Christian; Jutand, Anny; Negri, Sergio; Fauvarque, Jean Francois  
 CS Lab. Chim., Ec. Norm. Sup., Paris, 75231, Fr.  
 SO Journal of Organometallic Chemistry (1990), 390(3), 389-98  
 CODEN: JORCAI; ISSN: 0022-328X  
 DT Journal  
 LA English  
 OS CASREACT 113:211743  
 GI



AB 4,4'-Unsym. substituted biphenyls were synthesized by cross-coupling  
 reactions of substituted aromatic organometallic reagents and aromatic halides  
 catalyzed by palladium complexes. This two-step method from com.  
 available aromatic halides was used for the synthesis of a series of  
 donor/acceptor para-substituted biphenyls, RC<sub>6</sub>H<sub>4</sub>CGH<sub>4</sub>RI (R = electron donor  
 group, RI = electron acceptor group), which are of interest as liquid  
 crystal precursors and as having potential in nonlinear optics. Thus,  
 4-Me<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>ZnCl reacted with 4-BrC<sub>6</sub>H<sub>4</sub>CN to give 78% 4-Me<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>CGH<sub>4</sub>CN-4'.  
 Biaryls (e.g., I, X = O, S) in which the donor-Ph moiety is replaced by  
 2-furyl or 2-thienyl were synthesized similarly. The method was also used  
 for the convergent synthesis of previously unreported unsym. substituted  
 polyaryls 4-R(C<sub>6</sub>H<sub>4</sub>)<sub>n</sub>CN (R = Br, Me<sub>2</sub>N, MeS; n = 3, 4).  
 IT 130447-14-2P, 4-(Dimethylamino)-4'-cyano-p-tetraphenyl  
 RL: SPN (Synthetic preparation): PREP (Preparation)  
 (preparation of)  
 RN 130447-14-2 CAPLUS  
 CN [1,1':4',1'':4'',1''':4''',1''''-quaterphenyl]-4-carbonitrile, 4'''-(dimethylamino)-  
 (9CI) (CA INDEX NAME)

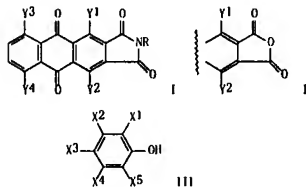


L5 ANSWER 143 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



L5 ANSWER 143 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1990:593451 CAPLUS  
 DN 113:193451  
 TI Preparation of anthraquinonedicarboxylic imide dyes  
 IN Ito, Naoto; Mianwa, Tsugumi  
 PA Mitsui Toatsu Chemicals, Inc., Japan  
 SO Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKKXAF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1  

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 JP 02018456	A	19900122	JP 1988-166866	19880706 <-
JP 05013992	B	19930223		
PRA1 JP 1988-166866		19880706		
OS WARPAT 113:193451				
GI				



AB Anthraquinone dyes I [R = (un)substituted alkyl, cycloalkyl, aryl,  
 heterocyclic residue; Y1-Y4 = H, (alkyl)amino, OH, alkoxy, halogen] are  
 prepared by treating anthraquinonedicarboxylic anhydrides II with amines  
 RNH<sub>2</sub> in phenols III (X1-X5 = H, alkyl, halogen) in the presence or absence  
 of (iso)quinoline, pyridine, mono-, di-, or trialkylpyridines under  
 heating. Thus, II (Y1 = Y2 = NH<sub>2</sub>, Y3 = Y4 = H) was stirred with  
 2-aminonaphthalene in acetone in the presence of isoquinoline at  
 150° for 4 h to give I (R = β-naphthyl, Y1 = Y2 = NH<sub>2</sub>, Y3 = Y4  
 = H) in 95% purity.  
 IT 128012-17-9P  
 RL: IMF (Industrial manufacture): PREP (Preparation)  
 (preparation of, as dyes)  
 RN 128012-17-9 CAPLUS  
 CN 1H-Naphth[2,3-f]isoindole-1,3,5,10(2H)-tetrone, 4-amino-6,9,11-trihydroxy-  
 2-[1,1':4',1'':4'',1''':4''',1''''-quaterphenyl]-4-yl- (9CI) (CA INDEX NAME)

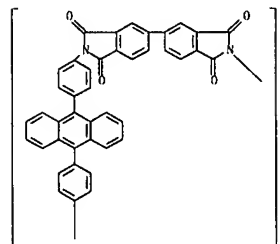
L5 ANSWER 144 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1990:442164 CAPLUS

DN 113:42164  
 TI Nonsymmetric polyimide membranes for gas separation and their manufacture  
 IN Nakatani, Masayuki; Kusuki, Yoshihiro  
 PA Ube Industries, Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKKXAF

DT Patent  
 LA Japanese  
 FAN, CNT 1  

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 JP 02014723	A	19900118	JP 1988-162425	19880701 <-
JP 06036856	B	19940518		
PRA1 JP 1988-162425		19880701		

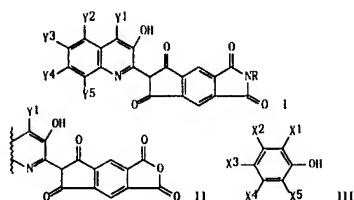
AB Title membranes useful for separation or concentration of CO<sub>2</sub> (g) are prepared by  
 dissolving polyimides containing >90% biphenyltetracarboxylic  
 acid-9,10-bis(4-aminophenyl)anthracene (I) copolymer in halogenated  
 phenol, forming membranes, and coagulating in a 40-60:40-60 a/c. water  
 mixture. Hollow fibers prepared from a p-chlorophenol solution of  
 2,3,3',4'-biphenyltetracarboxylic dianhydride (II)-I copolymer and  
 coagulated in a 50:50 EtOH-water mixture then a 60:40 mixture had CO<sub>2</sub>  
 permeability 8.6 × 10<sup>-5</sup> cm<sup>3</sup>/cm<sup>2</sup>-s-cmHg and CO<sub>2</sub>/CH<sub>4</sub> selectivity 54,  
 vs. 0.2 × 10<sup>-5</sup> and 48, resp., for a hollow fibers of  
 II-4,4'-diaminodiphenyl ether copolymer.  
 IT 106725-35-3  
 RL: USES (Uses)  
 (hollow-fiber membranes, for carbon dioxide separation and concentration)  
 RN 106725-35-3 CAPLUS  
 CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-  
 diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9CI) (CA INDEX  
 NAME)





L5 ANSWER 145 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1990:425556 CAPLUS  
 DN 113:25556  
 TI Preparation of quinophthalone imide dyes  
 IN Ito, Naoto; Misawa, Tsugumi  
 PA Mitsui Toatsu Chemicals, Inc., Japan  
 SO Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02018460	A	19900122	JP 1988-167394	19880705 <--
JP 06019035	B	19940316		
PRA1 JP 1988-167394		19880705		
OS WARPAT 113:25556				
GI				

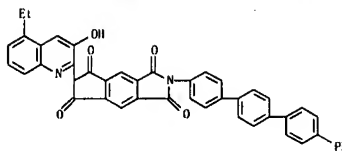


AB Quinophthalone dyes I [R = (un)substituted alkyl, cycloalkyl, aryl, heterocyclic residues; Y1-Y5 = H, alkyl, (alkyl)amino, OH, alkoxy, halogen] are prepared by reacting quinophthalonedicarboxylic anhydrides II with RNH2 in phenols III (X1-X5 = H, alkyl, halogen) in the presence or absence of (iso)quinoline, pyridine, mono-, di-, or trialkylpyridines under heating. Thus, II (Y1-Y5 = H) was stirred with 2-aminonaphthalene in m-cresol in the presence of isoquinoline at 150° for 4 h to give I (R = p-naphthyl, Y1-Y5 = H, ) in 95% purity.

IT 128029-38-9P  
 RL: IMP (Industrial manufacture): PREP (Preparation)  
 (preparation of, as dyes)

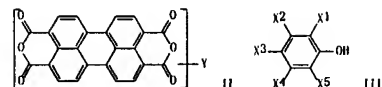
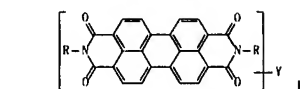
RN 128029-38-9 CAPLUS  
 CN Cyclopent[flisoindole-1,3,5,7(2H,6H)-tetrone, 6-(5-ethyl-3-hydroxy-2-quinolinyl)-2-[1,1':4',1'':4'':1'']-quaterphenyl]-4-yl- (9C1) (CA INDEX NAME)

L5 ANSWER 145 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



L5 ANSWER 146 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1990:425555 CAPLUS  
 DN 113:25555  
 TI Preparation of perylene dyes  
 IN Ito, Naoto; Misawa, Tsugumi  
 PA Mitsui Toatsu Chemicals, Inc., Japan  
 SO Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02016165	A	19900119	JP 1988-164998	19880704 <--
JP 05013991	B	19930223		
PRA1 JP 1988-164998		19880704		
OS WARPAT 113:25555				
GI				

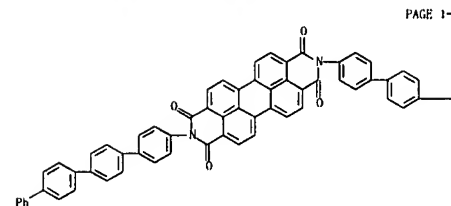


AB Perylene dyes I [R = (un)substituted alkyl, cyclic alkyl, aryl, heterocyclic residue; Y = H, alkyl, (alkyl)amino, OH, alkoxy, halogen] are prepared by treating perylenetetracarboxylic anhydrides II with RNH2 in phenols III (X1-X5 = alkyl, halogen, H) in the presence or absence of (iso)quinoline, pyridine, mono-, di-, or trialkylpyridine under heating. Thus, II (Y = H), 2-aminonaphthalene, isoquinoline, and m-cresol were heated at 150° for 4 h with stirring to give I (R = p-naphthyl, Y = H) of 95% purity.

IT 127784-38-7P  
 RL: IMP (Industrial manufacture): PREP (Preparation)  
 (preparation of, as dye)

RN 127784-38-7 CAPLUS  
 CN Anthra[2,1,9-def:6,5,10-d'e'f']disoquinoline-1,3,8,10(2H,9H)-tetrone, 2,9-bis([1,1':4',1'':4'':1'']-quaterphenyl)-4-yl- (9C1) (CA INDEX NAME)

L5 ANSWER 146 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



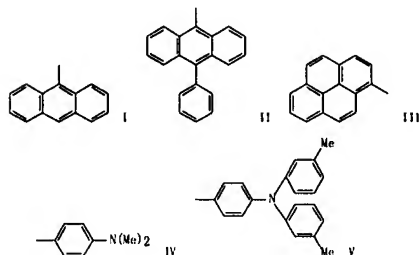
PAGE 1-A

PAGE 1-B



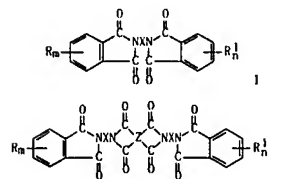
LS ANSWER 147 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1980:141510 CAPLUS  
DN 113:14510  
TI Electrolytic chemiluminescence laser and apparatus for generation thereof  
IN Kojima, Hiroyuki  
PA Agency of Industrial Sciences and Technology, Japan  
SO Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JXXXXF  
DT Patent  
LA Japanese  
FAN CNT 1

	<u>PATENT NO.</u>	<u>KIND</u>	<u>DATE</u>	<u>APPLICATION NO.</u>	<u>DATE</u>
PI	JP 01278789	A	19891109	JP 1988-108838	19880430 <
	JP 06066528	B	19940824		
PRAI	JP 1988-108838		19880430		
OS	KARPAT 113:14510				
GI					



AB	A method for generating a tunable pulse laser electrochem, in the visible range and an electrolytic cell apparatus therefor are claimed, wherein the method comprises flowing a solution of a compound AD (A = I, II, III; R = IV, V) in an aprotic organic solvent through a thin-layer cell, consisting of a pair of parallel flat electrodes, under an a.c. voltage, and wherein the apparatus comprises a totally reflecting mirror at I end of the cell and a partially reflecting mirror at the other end, disposed perpendicularly to the plane of the cell
IT	71901-29-6 74296-02-9 RL: PRP (Properties) (electrolytic chemiluminescence laser containing, tunable pulse)
RN	71901-29-6 CAPLUS
CN	Benzoamine, N,N-dimethyl-4-(10-phenyl-9-anthracenyl)- (9C1) (CA INDEX NAME)

L5	ANSWER 148 OF 201	CAPLUS	COPYRIGHT 2007 ACS on STN		
AN	1990:159731	CAPLUS			
DI	112:159731				
DN	UV-screening diimides for molded thermoplastic polyesters				
IN	Hirahara, Takuji; Nakamura, Takashi; Kumeno, Yoshiko; Ohta, Takayuki;				
PA	Kasai, Teisuo				
SO	Mitsubishi Kasei Corp., Japan				
	Eur. Pat. Appl., 23 pp.				
	CODEN: EPXXDW				
DT	Patent				
LA	English				
FAN	CIT 1				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1	EP 335595	A2	19891004	EP 1989-302910	1989032
	EP 335595	A1	19910206		
	EP 335595	B1	19940608		
	R: DE, FR, GB				
	JP 01247451	A	19891003	JP 1988-73421	1988032
	JP 08060614	B	19950124		
	JP 01247452	A	19891003	JP 1988-73424	1988032
	JP 08016188	B	19950221		
	US 4965302	A	19901023	US 1989-328095	1989032
	KR 129545	B1	19980407	KR 1989-4039	1989032
PRA1	JP 1988-73421	A	19880329		
	JP 1988-73424	A	19880329		
CI					

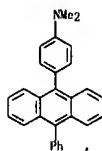


AB Title diimides comprise isophthalimide derivs. I and II (m, n = 0-4; R, R1 = halogen, COOH or its ester, OH, AcO, N1Z, CN, NO2, SO3H or its metal salts, alkyl, aliphatic and aromatic groups; X = aromatic-containing groups, Z = aromatic tetra-carboxylic acid residue). Heating bis(β-hydroxyethyl) terephthalate 4000, GeO2 0.48 orthophosphoric acid 0.4, 4, and 9, 10-bis(4'-aminophenyl)anthracene diimide with trimellitic anhydride 15 parts prepared a polyester which was extrusion molded into 350-μm film. The film showed light transmittance of 0.2, 0, and 0% at 370, 380, and 400 nm, resp., vs. 68, 68, and 68%, resp., in the absence of the diimide.

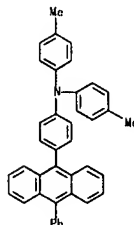
IT 126221-64-5 126221-71-4 126221-72-5  
126259-79-8  
RL: USES (Uses)  
(UV-absorbents, for polyester moldings, preparation of)

RN 126221-64-5 CAPLUS  
10-phenylene-5-carboxylic acid, 2,2'-(5,7-dihydro-1,3,5,7-tetraoxabenz[1,2,4,5-c]bis[1,2,4,5-dioxo-2,6(1H,3H)-dipyrro]bis(4,1-phenylene)-9,9-ethanedicarboxyl-4,1-phenylene]bis[2,3-dihydro-1,3-dioxo-9(1H)-9(1H)-CA

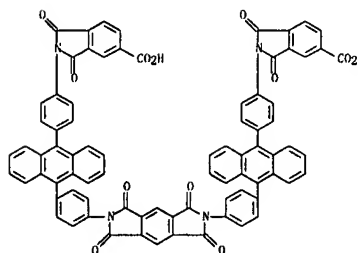
L5 ANSWER 147 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



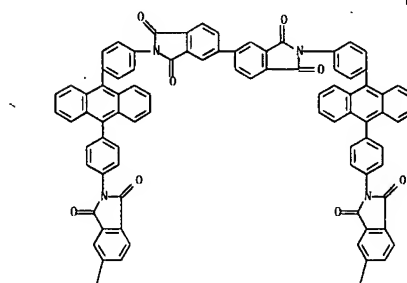
RN 74296-02-9 CAPIUS  
CN Benzenamino, N,N-bis(4-methylphenyl)-4-(10-phenyl)-9-anthracenyl)- (9CI)  
(CA INDEX NAME)



1.5 ANSWER 148 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
INDEX NAME)

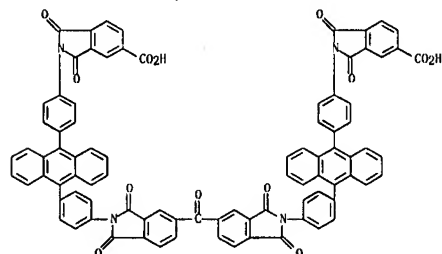


RN 126221-71-4 CAPIUS  
 CN 1H-isoindole-5-carboxylic acid, 2,2'-([1,1',3,3'-tetrahydro-1,1',3,3'-  
 tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)bis(4,1-phenylene-10,9-  
 anthracenediyl-4,1-phenylene)bis[2,3-dihydro-1,3-dioxo- (9CI) (CA INDEX  
 NAME)



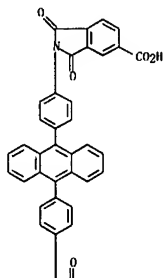
RN 126221-72-5 CAPLUS

L5 ANSWER 148 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
 CN 1H-isoindole-5-carboxylic acid, 2,2'-(carbonylbis[(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-4,1-phenylene]-10,9-anthracenediyl)-4,1-phenylene]bis[2,3-dihydro-1,3-dioxo- (9C1) (CA INDEX NAME)

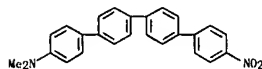


RN 126259-79-8 CAPLUS  
 CN 1H-isoindole-5-carboxylic acid, 2,2'-(9,10-anthracenediyl)-4,1-phenylene]bis[2,3-dihydro-1,3-dioxo- (9C1) (CA INDEX NAME)

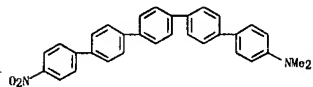
PAGE 1-A



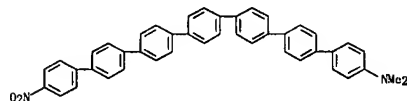
L5 ANSWER 149 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1990:27665 CAPLUS  
 UN 112:27665  
 TI Design of novel conjugated molecules with large hyperpolarizabilities  
 AU Morley, J. O.  
 CS Fine Chem. Res. Cent., ICI Colours and Fine Chem., Manchester, M9 3DA, UK  
 SD Springer Proceedings in Physics (1989), Volume Date 1988,  
 36 (Nonlinear Opt. Org. Semicond.), 86-97  
 CODEN: SPPPEL; ISSN: 0930-9989  
 JT Journal  
 LA English  
 AB The hyperpolarizability was calculated for a number of organic mols. by using a CNDO/S method coupled with a sum-over-states procedure. The method uses an initial CI treatment of the ground and excited state wave functions and then evaluation of the hyperpolarizability tensor from the improved wave functions.  
 IT 107716-13-2 107716-14-3 107716-15-4  
 107716-16-5 108030-45-1 114261-05-1  
 RL: PRP (Properties)  
 (hyperpolarizability calcs. for)  
 RN 107716-13-2 CAPLUS  
 CN [1,1':4,1'':4'':1''':4''':1''''-Quaterphenyl]-4-amine, N,N-dimethyl-4''-nitro- (9C1) (CA INDEX NAME)



RN 107716-14-3 CAPLUS  
 CN [1,1':4,1'':4'':1''':4''':1''''-Quinquephenyl]-4-amine, N,N-dimethyl-4''-nitro- (9C1) (CA INDEX NAME)

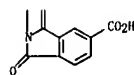


RN 107716-15-4 CAPLUS  
 CN [1,1':4,1'':4'':1''':4''':1''''-Septiphenyl]-4-amine, N,N-dimethyl-4''-nitro- (9C1) (CA INDEX NAME)



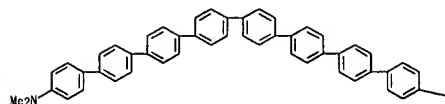
RN 107716-16-5 CAPLUS  
 CN [1,1':4,1'':4'':1''':4''':1''''-Octiphenyl]-4-amine, N,N-dimethyl-4''-nitro- (9C1) (CA INDEX NAME)

L5 ANSWER 148 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
 PAGE 2-A



L5 ANSWER 149 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

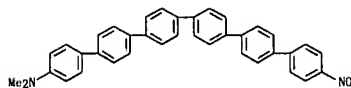
PAGE 1-A



PAGE 1-B

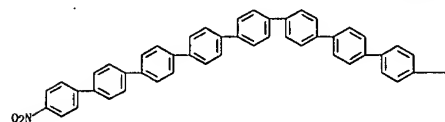
-NO2

RN 108030-45-1 CAPLUS  
 CN [1,1':4,1'':4'':1''':4''':1''''-Sexiphenyl]-4-amine, N,N-dimethyl-4''-nitro- (9C1) (CA INDEX NAME)



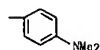
RN 114261-05-1 CAPLUS  
 CN [1,1':4,1'':4'':1''':4''':1''''-Noviphenyl]-4-amine, N,N-dimethyl-4''-nitro- (9C1) (CA INDEX NAME)

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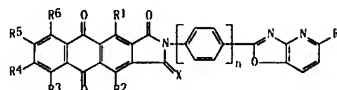
L5 ANSWER 149 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-8

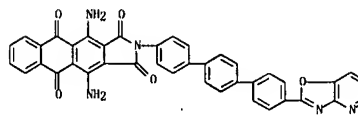


LS ANSWER 15 OF 301 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1990:22005 CAPLUS  
DN 112:22005  
TI Anthraquinone derivative-containing polarization films  
IN Miura, Konohe, Ozawa, Tetsuo; Masuda, Narihiro  
FI Mitsubishi Kasei Corp., Japan  
SO Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JXKXAF  
DT Patent  
LA Japanese  
FAN CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.
P1	JP 01131503	A	19890524	JP 1987-290061
PRAI	JP 1987-290061		19871117	
OS	WARPAT 112:22005			

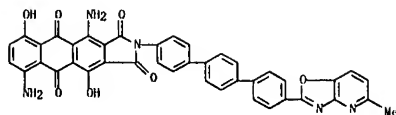


AB	Title films, w/h high polarization effects and good transparency and heat, moisture, and weather resistance, contain anthraquinone deriva. I [R1-R6 = (H, halo, OH, alkyl, or alkoxyalkyl)-substituted] nR7 = H or alkyl; X = O, S, or NH; n = 1-3]. A film prepared from a molten mixture of 1000 g poly(ethylene naphthalate) and 1 g I [R1 = R2 = NH2, R3-R7 = H, X = O, n = 2] was stretched 5:1 monoaixially at 140° to give a 100-mμ greenish blue film having maximum absorption at 685 nm and dye orientation factor 0.95.
IT	12489-96-9 124489-99-2 124490-06-8 RL: USES (Uses) (polarizers, polarization films containing, heat- and moisture- and weather-resistant capulus)
RN	12489-96-9- CASUS
CN	4,11-bis[2,3-bis(1-isopropyl-4,5,10-trimethyl-2-ylidene-1,3,5,10(2H)-tetraene, 4,11-diamino-2-(4'-(oxazol-4,5-bispyridin-2-yl)[1,1',4',1'']-terphenyl)-4-yl)- (SC1) (CA INDEX NAME

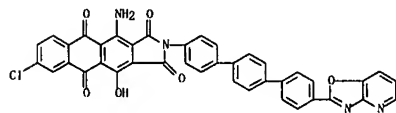


RN 124489-99-2 CAPIUS  
CN 11-Naphth[2,3-f]isindole-1,3,5,10(2H)-tetrone, 4,9-dimino-6,11-dihydroxy-  
2-[4'-(5-methyloxazolo[4,5-b]pyridin-2-yl)]{1,1':4',1''-terphenyl]-4-yl]-  
(9C1) (CA INDEX NAME)

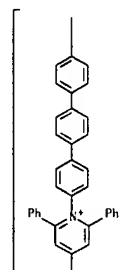
L5 ANSWER 150 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 124490-06-8 CAPLUS  
CN 1H-Naphth[2,3-f]isoindole-1,3,5,10(2H)-tetrone, 11-amino-7-chloro-4-hydroxy-2-(4''-oxazolo[4,5-b]pyridin-2-yl)[1,1':4',1''-terphenyl]-4-yl)-(9C1) (CA INDEX NAME)



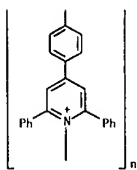
L5 ANSWER 151 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1989:554457 CAPLUS  
 DN 111:154457  
 DT Ring-transmutation polymerization: synthesis and characterization of  
 aromatic polyvinylidene salts  
 AU Harris, Frank W.; Chung, Chun Hsu K.  
 CS Dep. Polym. Sci., Univ. Akron, Akron, OH, 44325, USA  
 SO Polymer Preprints (American Chemical Society, Division of Polymer  
 Chemistry) (1989), 30(1), 433-4  
 CODEN: ACPPAY; ISSN: 0032-3934  
 DT Journal  
 LA English  
 AB Polymerization of 4,4'-p-phenylenebis(2,6-diphenylpyrrol) ditetrafluoroborate  
 with aromatic diamines gave soluble, rigid-rod ionene polymers with inherent  
 viscosities of 0.8-2.9 dL/g at 30° in DMF. The liquid-crystalline  
 polymers melted near 400° and had glass temps. 196-260°. The  
 TCNQ salts of the polymers were doped with neutral TCNQ and had elec.  
 conductivities 4 orders of magnitude greater than those of the undoped  
 salts.  
 IT 122538-91-4P  
 RL: SPW (Synthetic preparation): PREP (Preparation)  
 (preparation and viscosity and thermal properties of)  
 RN 122538-91-4 CAPLUS  
 CN Poly[ (2,6-diphenylpyridinium-1,4-diyl)-1,4-phenylene(2,6-  
 diphenylpyridinium-4,1-diyl)]<sub>n</sub>: 1,4'-1,1'-terphenyl-4,4'-diyl  
 bis[tetrafluoroborate(1-)]<sub>n</sub> (9C1) (CA INDEX NAME)  
 CM 1  
 CN 1  
 CR 122538-90-3  
 CUP (C58 1140 N2)n  
 CCI PWS



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L5 ANSWER 151 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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CN 2

CRN 14874-70-5

CMF B F4

CCI CCS



L5 ANSWER 152 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1989:424013 CAPLUS

DN 111:24013

TI Soluble aromatic polyimides derived from new phenylated diamines

AU Harris, Frank W.; Sakaguchi, Yoshimitsu

CS Dep. Polym. Sci., Univ. Akron, Akron, OH, 44325, USA

SO Polymeric Materials Science and Engineering (1989), 60, 187-91

CODEN: PMSEDD; ISSN: 0743-0515

DT Journal

LA English

AB

1,3- And 1,4-bis(4-amino-3,5-diphenylphenyl)benzene, 1,4-bis(4-aminophenyl)-2,3,5-triphenylbenzene, and 1,4-bis(4-aminophenyl)-2,3,5,6-tetraphenylbenzene were prepared and polymerized with pyromellitic dianhydride, 3,3',4,4'-biphenyltetracarboxylic dianhydride, 4,4'-oxydiphthalic anhydride, or 3,3',4,4'-diphenylsulfonitetracarboxylic dianhydride to give polyimides. The polymers exhibited a 5% weight loss in N at temps. 500-600° as determined by TGA.

IT 121265-78-9P 121265-79-0P 121265-80-3P

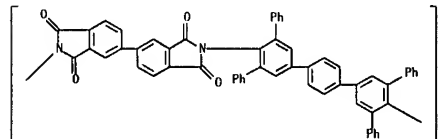
121265-82-5P 121265-83-6P 121265-84-7P

RL: SPN (Synthetic preparation): PREP (Preparation)

(preparation and characterization of)

RN 121265-78-9 CAPLUS

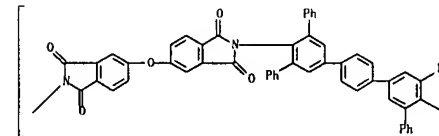
CN Poly[(1,3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)(5,5'-diphenyl[1,1':3,1':4',1''':3'',1''':-quinquephenyl]-6,4'-diyl)] (9C1) (CA INDEX NAME)



RN 121265-79-0 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)(5,5'-diphenyl[1,1':3,1':4',1''':3'',1''':-quinquephenyl]-6,4'-diyl)] (9C1) (CA INDEX NAME)

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L5 ANSWER 152 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

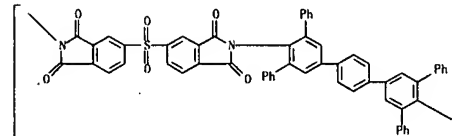
PAGE 1-B



RN 121265-80-3 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)sulfonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)(5,5'-diphenyl[1,1':3,1':4',1''':3'',1''':-quinquephenyl]-4',6'-diyl)] (9C1) (CA INDEX NAME)

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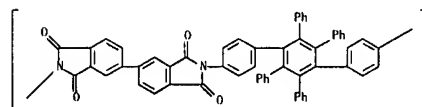
PAGE 1-B



RN 121265-82-5 CAPLUS

CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)(2',3',5',6'-tetraphenyl[1,1':4',1''':-terphenyl]-4,4'-diyl)-1,4-phenylene] (9C1) (CA INDEX NAME)

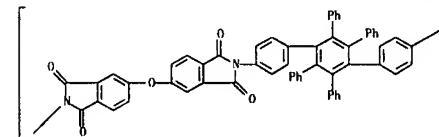
L5 ANSWER 152 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 121265-83-6 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)(2',3',5',6'-tetraphenyl[1,1':4',1''':-terphenyl]-4,4'-diyl)] (9C1) (CA INDEX NAME)

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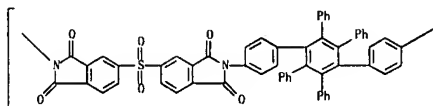


RN 121265-84-7 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)sulfonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)(2',3',5',6'-tetraphenyl[1,1':4',1''':-terphenyl]-4,4'-diyl)] (9C1) (CA INDEX NAME)

L5 ANSWER 152 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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L5 ANSWER 153 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

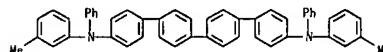
AN 1989:125300 CAPLUS  
 DN 110:125300  
 T1 Stabilized polysilylene for imaging member  
 IN Johnson, Gordon E.; Stolka, Milan; Wengley, Ronald J.; Roberts, Frederick J., Jr.; Badesha, Santokh S.  
 PA Xerox Corp., USA  
 SO U.S., 7 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 4758488	A	19880719	US 1987-88366	19870824 <--
PRAI US 1987-88366		19870824		

AB A photoresponsive imaging member is comprised of a support, a photogenerating layer, and a hole-transporting layer containing a polysilylene stabilized with a component possessing an ionization potential equal or greater than the polysilylene and an additive absorption spectrum which overlaps the fluorescent spectrum of the polysilylene. The hole-transporting layer does not degrade on irradiation with UV radiation. Thus, a solution of poly(methylphenylsilylene) was added with 9,10-diphenylanthracene. The mixture was used to form a film which was stable when subjected to UV irradiation for 5 min.

IT 119429-17-3  
 RL: USES (Uses)  
 (UV stabilization of polysilylene with)

RN 119429-17-3 CAPLUS  
 CN [1,1':4',1'':4'',1''':4'''-Quaterphenyl]-4,4'''-diamine, N,N'-bis(3-methylphenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)



L5 ANSWER 154 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1989:94360 CAPLUS  
 Correction of: 1988:509706

DN 110:94360  
 Correction of: 109:109706

T1 Triplet-triplet absorption spectra of organic molecules in condensed phases.

AU Carmichael, Ian; Hug, Gordon L.  
 CS Radiat. Chem. Data Cent., Univ. Notre Dame, Notre Dame, IN, 46556, USA  
 SO Journal of Physical and Chemical Reference Data (1986), 15(1), 1-250

CODEN: JPCRBV; ISSN: 0047-2689

DT Journal

LA English

AB A review in which a compilation is given of spectral parameters associated with triplet-triplet absorption of organic mols. in condensed media. The wavelengths of maximum absorbance and the corresponding extinction coeffs., where known, were critically evaluated. Other data, for example, lifetimes, energies, and energy transfer rates, relevant to the triplet states of these mols., are included by way of comments, but have not been subjected to a similar scrutiny. An introduction is given to triplet state processes in solution and solids, developing the conceptual background and offering a historical perspective on the detection and measurement of triplet state absorption. Techniques employed to populate the triplet state are reviewed and the various approaches to the estimation of the extinction coefficient of triplet-triplet absorption are discussed. A statistical anal. of the available data is presented and recommendations for a hierarchical choice of extinction coeffs. are made. Data collection is expected to be complete through the end of 1984.

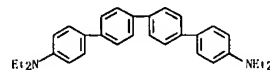
IT 53693-68-8

RL: PRP (Properties)

(triplet-triplet absorption spectrum of)

RN 53693-68-8 CAPLUS

CN [1,1':4',1'':4'',1''':4'''-Quaterphenyl]-4,4'''-diamine, N,N,N',N'-tetraethyl- (9CI) (CA INDEX NAME)



L5 ANSWER 155 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1988:611753 CAPLUS

DN 109:211753

T1 Chemical structures and properties of low thermal expansion coefficient polyimides

AU Numata, Shunichi; Kinjo, Noriyuki; Makino, Daisuke

CS Hitachi Res. Lab., Hitachi, Ltd., Hitachi, 319-12, Japan

SO Polymer Engineering and Science (1988), 28(14), 906-11

CODEN: PYESA; ISSN: 0032-3888

DT Journal

LA English

AB The thermal expansion coeffs. (α) of various polyimides obtained from pyromellitic dianhydride (I), 3,3',4,4'-biphenyltetracarboxylic dianhydride (II), or 3,3',4,4'-benzophenonetetracarboxylic dianhydride and aromatic diamines were reported. Low α values obtained for I- and II-based polyimides were related to the linearity of the polymer backbone. Thermal stresses in polyimide coatings on Si wafers and stainless steel were measured and discussed.

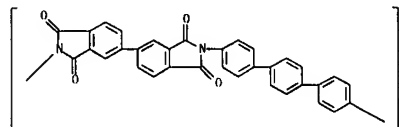
IT 26402-03-9 83932-46-1

RL: PKP (Properties)

(thermal expansion coefficient of)

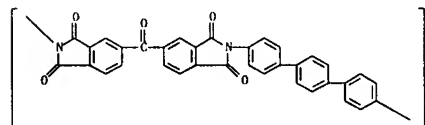
RN 26402-03-9 CAPLUS

CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)[1,1':4',1'':4'',1''':4'''-terphenyl]-4,4'''-diyl] (9CI) (CA INDEX NAME)



RN 83932-46-1 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[1,1':4',1'':4'',1''':4'''-terphenyl]-4,4'''-diyl] (9CI) (CA INDEX NAME)



LS ANSWER 156 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1988:509706 CAPLUS

Correction of: 1986:552243

DN 109:109706

Correction of: 105:152243

TI Triplet-triplet absorption spectra of organic molecules in condensed phases

AU Carmichael, Ian; Hug, Gordon L.

CS Radiat. Chem. Data Cent., Univ. Notre Dame, Notre Dame, IN, 46556, USA

SO Journal of Physical and Chemical Reference Data (1986), 15(1), 1-250

CODEN: JPCRBU; ISSN: 0047-2689

Journal: General Review

UT English

LA English

AB A review in which a compilation is given of spectral parameters associated with triplet-triplet absorption of organic mols. in condensed media. Other data, for example, lifetimes, energies and energy transfer rates, relevant to the triplet states of these mols., are included by way of comments, but have not been subjected to a similar scrutiny. An introduction is given to triplet state processes in solution and solids, developing the conceptual background and offering an historical perspective on the detection and measurement of triplet state absorption. Techniques employed to populate the triplet state are reviewed and the various approaches to the estimation of the extinction coefficient of triplet-triplet absorption are discussed. A statistical anal. of the available data is presented and recommendations for a hierarchical choice of extinction coeffs. are made. Data collection is expected to be complete through the end of 1984.

IT 53693-68-8

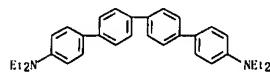
RL: PRP (Properties)

(triplet-triplet absorption spectrum of)

RN 53693-68-8 CAPLUS

CN [1,1':4',1'':4'',1''':4'''-Quaterphenyl]-4,4'''-diamine, N,N,N',N'-tetraethyl-

(9C1) (CA INDEX NAME)



LS ANSWER 157 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1988:445658 CAPLUS

DN 109:45658

TI A CNDVSB program for the calculation of second-order molecular

polarizabilities, and its application

AU Allen, S.; Morley, J. O.; Pugh, D.; Docherty, V. J.

CS Electron. Group, ICI, Runcorn/Cheshire, UK

SO Proceedings of SPIE-The International Society for Optical Engineering (1987), 682(Mol. Polym. Optoelectron. Mater.: Fundam. Appl.), 20-6

CODEN: PSISDG; ISSN: 0277-786X

DT Journal

LA English

AB A semiempirical CNDVSB computer program was developed to calculate the 2nd-order nonlinear optical polarizabilities of mols. The program was parameterized by comparison of calculated and exptl. values of mol. properties over a large wavelength range. The use of the program is described, both in the evaluation of the potential of specific comds. and also to study trends in series of related mols. In particular, the effect of conjugation length on the nonlinear optical properties of polyphenyls and polyenes is described.

IT 107716-13-2 107716-14-3 107716-15-4

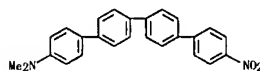
RL: PRP (Properties)

(second-order nonlinear optical polarizability of, computer program for calcn. of)

RN 107716-13-2 CAPLUS

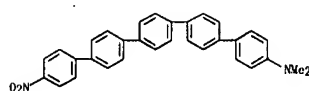
CN [1,1':4',1'':4'',1''':4'''-Quaterphenyl]-4-amine, N,N-dimethyl-4'''-nitro-

(9C1) (CA INDEX NAME)



RN 107716-14-3 CAPLUS

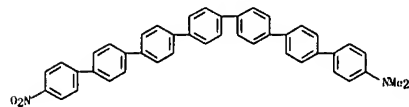
CN [1,1':4',1'':4'',1''':4'''-Quaterphenyl]-4-amine, N,N-dimethyl-4'''-nitro- (9C1) (CA INDEX NAME)



RN 107716-15-4 CAPLUS

CN [1,1':4',1'':4'',1''':4'''-Quaterphenyl]-4-amine, N,N-dimethyl-4'''-nitro- (9C1) (CA INDEX NAME)

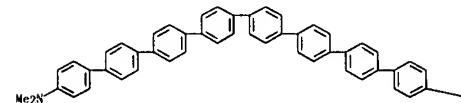
LS ANSWER 157 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 107716-16-5 CAPLUS

CN [1,1':4',1'':4'',1''':4'''-Quaterphenyl]-4-amine, N,N-dimethyl-4'''-nitro- (9C1) (CA INDEX NAME)

PAGE 1-A

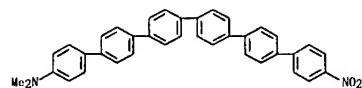


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-NO2

RN 108030-45-1 CAPLUS

CN [1,1':4',1'':4'',1''':4'''-Quaterphenyl]-4-amine, N,N-dimethyl-4'''-nitro- (9C1) (CA INDEX NAME)



LS ANSWER 158 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1988:188088 CAPLUS

DN 108:188088

TI Diphenylanthracene-containing polyimide films

IN Ota, Takayuki; Yamamoto, Tokio; Takamiya, Naoki; Kasai, Tetsuo

PA Mitsubishi Chemical Industries Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

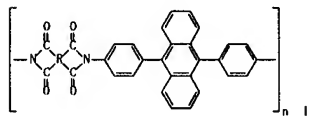
CODEN: JXXXXF

DT Patent

LA Japanese

FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 62232436	A	19871012	JP 1986-75760	19860402 <-
PRAI JP 1986-75760		19860402		
GI				



AB Heat-resistant films with high tensile modulus and strength are prepared from polyimides I (R = tetravalent aromatic group) with inherent viscosity (eta) (at 30° in 9% concentrated H2SO4 or 0.5 g/dL concentration) 0.1-10 dL/g via precursor polyamic acids with eta (at 30° in N-methylpyrrolidone at 0.5 g/dL concentration) 0.1-10 dL/g. Thus, a solution of (I) was mixed with 17.66 g 3,3',4,4'-biphenyltetracarboxylic dianhydride and 240 g II and reacted 24 h to give a 7.45% polyamic acid solution eta 3.8 dL/g, which was cast 10 min on a glass plate at 120°, heated to 250° during 15 min, and heated 4 min at 350° to give a 25-μ polyimide film having tensile modulus 550 kg/mm2, tensile strength 26 kg/mm2, elongation 30%, glass transition temperature approx. 500° and 1.4 dL/g.

IT 106725-35-3

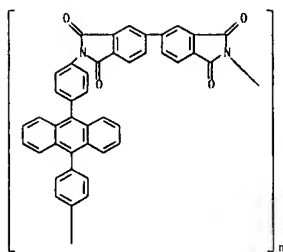
RL: USES (Uses)

(films, with good heat resistance and high tensile modulus)

RN 106725-35-3 CAPLUS

CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isindole]-2,2'-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)

L5 ANSWER 158 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



15 ANSWER 159 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1988:186108 CAPLUS

DN 108:186108

T1 Non-linear optical properties of organic molecules. Part 2. Effect of conjugation length and molecular volume on the calculated hyperpolarizabilities of polyphenyls and polyenes

AU Morley, John O.; Docherty, Vincent J.; Pugh, David

CS Org. Div., Imp. Chem. Ind. PLC, Blackley/Manchester, M9 3DA, UK

Journal of the Chemical Society, Perkin Transactions 2: Physical Organic Chemistry (1972-1999) (1987), (9), 1351-5  
CODEN: JCPKUH; ISSN: 0300-9580

DT Journal

DI Journal  
LA English

LA ENGLISH  
AR The calc

the group, the hyperconjugative effect of the  $\pi$ -conjugated system containing an electron-donating diethylamino group and an electron-withdrawing nitro group positioned at opposite ends of the conjugated system, slowly increase with an increasing number of Ph units: the effect per unit volume is a maximum for diethylamino-1,4-bis-nitrophenyl. In contrast, the calculated  $\pi$ -conjugation or polyene chain length of the donor and acceptor increases rapidly with an increasing number of ethenyl units, and the effect per unit volume is a maximum for 20 units. Overall, the polyene system shows an effect which is a least 20 times that of the polyphenyl system and is times that of any other known system. A similar effect is also found in the case of diethylaminopolypyrrols, though a comparison between calculated and exptl. dipole moments and electronic transition energies suggests that their hyperpolarizabilities may be somewhat overestimated at the CNDO level of approximation.

IT 107716-13-2 107716-14-3 107716-15-4

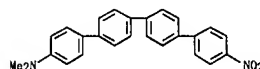
107716-16-5 108030-45-1 114261-05-1

RL: PRP (Properties)

(hyperpolarizabilities and nonlinear optical properties of, MO calcn.  
of)

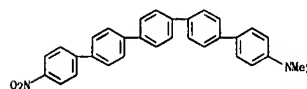
RN 107716-13-2 CAPLOS  
CN [1, 1', 4', 1'', 4'', 1''']

CN [1,1':4,1'':4'''-Quaterphenyl]-4-amine, N,N-dimethyl-4'''-nitro-  
(9CI) (CA INDEX NAME)



RN 107716-14-3 CAPLUS

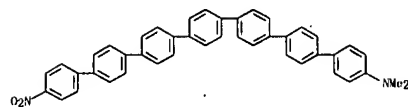
RN 107716-143 CAPLOS  
 CN [1,1':4',1'':4'':1''':4''':1''''-Quinquephenyl]-4-amine,  
 N,N-dimethyl-4''''-nitro- (9CI) (CA INDEX NAME)



RN 107716-15-4 CAPLUS

4-amine, N,N-dimethyl-4'-nitro- (9CI) (CA INDEX NAME)-Septiphenyl]-

1.5 ANSWER 159 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

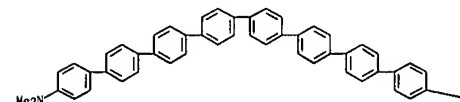


RN 107716-16-5 CAPI.US

[illegible]

NAME)

PAGE 1-A

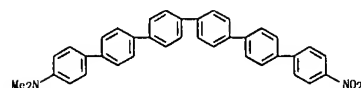


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- NO2

RN 108030-45-1 CAPLUS

CN [1,1':4',1'':4'',1''':4''',1''':4''',1''':4'''-Sexiphenyl]-4-amino,  
 N,N-dimethyl-4''''-nitro- (9CI) (CA INDEX NAME)

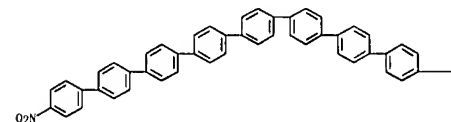


RN 114261-05-1 CAPLIS

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L5 ANSWER 159 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A



PAGE 1-B





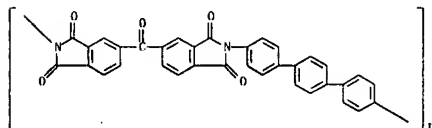
L5 ANSWER 160 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1988:122933 CAPLUS  
 DN 108:122933  
 TI Manufacture of flexible substrates for printed circuits  
 IN Toko, Akira; Takeda, Toshiro; Asakuma, Sumitoshi  
 PA Sumitomo Bakelite Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JXXXXF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62236732	A	19871016	JP 1986-79269	19860408 <-
JP 1986-79269		19860408		

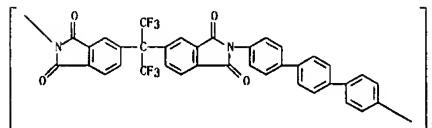
AB In forming a flexible substrate for a printed circuit, a polyamic acid, which has hardening shrinkage rate of <4%, linear expansion coefficient of <3.0 + 10-5/°C, and extension elasticity constant of <500 kg/mm<sup>2</sup>, is directly coated on a metal (e.g., Al) foil, and the coated foil is heated for hardening the polyamic acid. The hardened polyamic acid has extension rate of 5-25%, and its mol. unit has a 50-60% ladder. The substrate has excellent thermal resistance and mech. characteristics.

IT 83932-46-1  
 RL: USES (Uses)  
 (flexible substrates from metal foils coated with, for printed circuits)

RN 83932-46-1 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[1,1':4',1''-terphenyl]-4,4'-diyl] (9C1) (CA INDEX NAME)



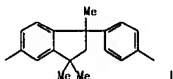
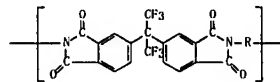
L5 ANSWER 161 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



L5 ANSWER 161 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1988:122080 CAPLUS  
 DN 108:122080  
 TI Ferroelectric liquid crystal devices equipped with orientation control films on support plates  
 IN Kitayama, Hiroyuki; Katagiri, Kazuharu; Yoshinaga, Kazuo; Tsuboyama, Akira; Shinjo, Kenji  
 PA Canon K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JXXXXF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62231937	A	19871012	JP 1986-72574	19860401 <-
JP 04066488	B	19921023		
JP 1986-72574		19860401		

GI



AB A liquid crystal device suited for use as a display or an optical switch comprises a pair of parallel support plates and a multiplicity of ferroelec. bistable nonhelically chiral smectic liquid crystalline layers having a mol. arrangement perpendicular to the plates, wherein 21 plate is coated with a polymer capable of preferentially orienting in the layers and having a structural repeating unit I (R = H, p-phenylene, m-phenylene, p-C6H4Z-p-C6H4, 1,5-naphthylene; Z = bond, O, CH2, S, SO2, CO, p-C6H4).

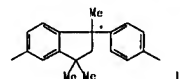
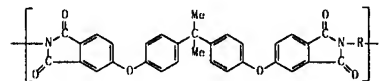
IT 113245-49-1  
 RL: USES (Uses)  
 (orientation control film from, for liquid crystal devices)

RN 113245-49-1 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene](1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[1,1':4',1''-terphenyl]-4,4'-diyl] (9C1) (CA INDEX NAME)

L5 ANSWER 162 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1988:122079 CAPLUS  
 DN 108:122079  
 TI Ferroelectric liquid crystal devices equipped with orientation control films on support plates  
 IN Katagiri, Kazuharu; Shinjo, Kenji; Yoshinaga, Kazuo; Tsuboyama, Akira; Kitayama, Hiroyuki  
 PA Canon K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JXXXXF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62231936	A	19871012	JP 1986-72573	19860401 <-
JP 1986-72573		19860401		

GI



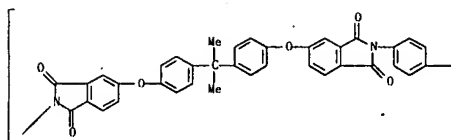
AB A liquid crystal device suited for use as a display or an optical switch comprises a pair of parallel support plates and a multiplicity of ferroelec. bistable nonhelically chiral smectic liquid crystalline layers having a mol. arrangement perpendicular to the plates, wherein 21 plate is coated with a polymer capable of preferentially orienting in the layers and having a structural repeating unit I (R = H, p-phenylene, m-phenylene, p-C6H4Z-p-C6H4, 1,5-naphthylene; Z = bond, O, CH2, S, SO2, CO, p-C6H4).

IT 113263-77-7  
 RL: USES (Uses)  
 (orientation control film from, for liquid crystal devices)

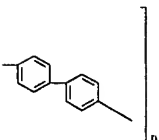
RN 113263-77-7 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy-1,4-phenylene(1-methyl-ethylidene)-1,4-phenyleneoxy(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[1,1':4',1''-terphenyl]-4,4'-diyl] (9C1) (CA INDEX NAME)

L5 ANSWER 162 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A



PAGE 1-B



L5 ANSWER 163 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1988:122078 CAPLUS

DN 108:122078

TI Ferroelectric liquid crystal devices equipped with orientation control

IN Shinjo, Kenji; Katagiri, Kazuharu; Kitayama, Hiroyuki; Yoshinaga, Kazuo;

PA Tauboyama, Akira

SO Jpn. Kokai Tokkyo Koho, 14 pp.

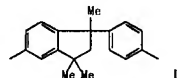
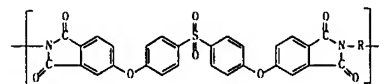
CODEN: JXXXXF

DT Patent

LA Japanese

FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 62231935	A	19871012	JP 1986-72572	19860401 <--
PRA1 JP 1986-72572		19860401		
GI				



AB A liquid crystal device suited for use as a display or an optical switch comprises a pair of parallel support plates and a multiplicity of ferroelec. bistable nonhelically chiral smectic liquid crystalline layers having a mol. arrangement perpendicular to the plates, wherein a plate is coated with a polymer capable of preferentially orienting in the layers and having a structural repeating unit I (R = 11, p-phenylene, m-phenylene, p-C6H4Z-pC6H4, 1,5-naphthylene; Z = bond, O, CH2, S, SO2, CO, p-C6H4).

IT 113263-86-8

RL: USES (Uses)

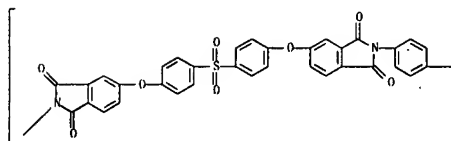
(orientation control film from, for liquid crystal devices)

RN 113263-86-8 CAPLUS

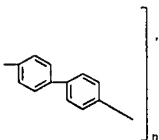
CN Poly[1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl]oxy-1,4-phenylenesulfonyl-1,4-phenylenoxy[1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl][1,1':4',1''-terphenyl]-4,4'-diyl] (9CI) (CA INDEX NAME)

L5 ANSWER 163 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A



PAGE 1-B



L5 ANSWER 164 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1988:95836 CAPLUS

DN 108:95836

TI Manufacture of polyimide-coated copper foils for flexible printed circuit boards

IN Toko, Akira; Takeda, Toshiro; Asakuma, Sumitoshi

PA Sumitomo Bakelite Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JXXXXF

DT Patent

LA Japanese

FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 62212139	A	19870918	JP 1986-54886	19860314 <--
PRA1 JP 1986-54886		19860314		
AB				

AB Title foils are manufactured by applying directly to metal foils polyamic acids capable of forming polyimides with a structural unit of mol. weight  $\geq 450$  and degree of ladder (number of aromatic and heterocyclic rings divided by number of bonds in the main chain in the structural unit + 100) 50-60% and curing. Thus, a 20% solution of 1 mol 4,4'-bis(4-aminophenoxy)biphenyl in a 90:10 mixture of N-methyl-2-pyrrolidone and PhMe was treated with 1 mol pyromellitic anhydride at 20° for 10 h under N to give a polyamic acid solution, which was applied to a Cu foil and heated at 80, 150, 250, and 350° for 30 min at each temperature to give a curl-free composite. The composite, after patterning and etching, was free of curls and wrinkles and the polyimide film remaining after complete etching-off of the Cu showed linear expansion coefficient  $2.5 \times 10^{-5}$  and thermal decomposition temperature  $\geq 500^\circ$ . The polyimide had a structural unit with mol. weight (calculated) 550 and degree of ladder 50.0%.

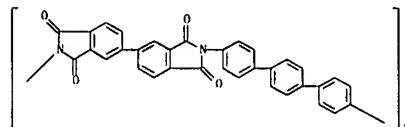
IT 26402-03-9

RL: USES (Uses)

(coatings, on copper foils, for flexible printed circuit boards)

RN 26402-03-9 CAPLUS

CN Poly[1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl][1,1':4',1''-terphenyl]-4,4'-diyl] (9CI) (CA INDEX NAME)



L5 ANSWER 165 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1989:76160 CAPLUS

UN 198:76160

TI Reexamination of the relationship between packing coefficient and thermal

AU Numata, Shunichi; Fujisaki, Koji; Kinjo, Noriyuki

CS Hitachi Res. Lab., Hitachi Ltd., Ibaraki, 319-12, Japan

SO Polymer (1987), 28(13), 2282-8

CODEN: POLMAG; ISSN: 0032-3861

DT Journal

LA English

AB The existence of a possible relationship between the mol. packing coefficient and the thermal expansion coefficient for various atom. polyimides was investigated. Rodlike low-thermal-expansion polyimides without side groups had very high packing coeffs., pointing to free volume as a factor in lowering their thermal expansion coeffs. But the small packing coeffs. for low-thermal-expansion polyimides with side groups indicated that this was not so. Also, even if the large packing coeffs. tended to increase the Young's moduli for these polyimides without side groups, the rodlike polyimides with side groups had small packing coeffs. and large Young's moduli. The polyimides with low packing coeffs. had very small diffusion coeffs. for water vapor.

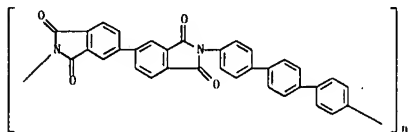
IT 26402-03-9 83932-46-1

RI: PRP (Properties)

(thermal expansion coefficient of, packing coefficient in relation to)

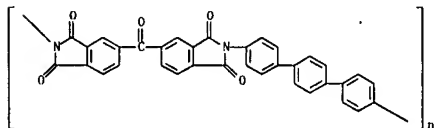
RN 26402-03-9 CAPLUS

CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)[1,1':4,1''-terphenyl]-4,4'-diyl] (9C1) (CA INDEX NAME)



RN 83932-46-1 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[1,1':4,1''-terphenyl]-4,4'-diyl] (9C1) (CA INDEX NAME)



L5 ANSWER 166 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1988:65981 CAPLUS

UN 198:65981

TI Electrophotographic charge-transporting terphenyl derivative

IN Kikuchi, Norihiro; Takiguchi, Takao; Uchihara, Masashige; Takahashi,

Hideoyuki; Koyama, Takashi; Matsumoto, Masakazu

PA Canon K. K., Japan

SD Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXAXF

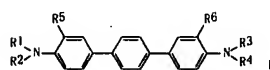
DT Patent

LA Japanese

FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62195667	A	19870828	JP 1986-37209	19860224 <--
JP 06073018	R	19940914		
PRI JP 1986-37209		19860224		

GI



AB A charge-transporting p-terphenyl derivative is used to prepare an electrophotog. composite photoconductor to improve its sensitivity and stability in the dark and light elec. potentials for repeated uses. The p-terphenyl derivative has the formula I (R1-R4 = alkyl, aryl, aralkyl, but they are not simultaneously aryl; R1-R2 and R3-R4 may form 5-6-membered ring with N; R5, R6 = H, alkyl, alkoxy, etc.).

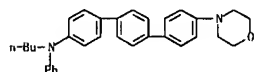
IT 112607-45-1P 112607-47-3P

RI: SPN (Synthetic preparation); PREP (Preparation)

(preparation and use of, as electrophotog. charge-transporting agent)

RN 112607-45-1 CAPLUS

CN [(1,1':4,1''-Terphenyl)-4-amine, N-butyl-4''-(4-morpholinyl)-N-phenyl- (9C1) (CA INDEX NAME)]

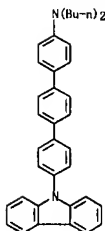


RN 112607-47-3 CAPLUS

CN [(1,1':4,1''-Terphenyl)-4-amine, N,N-dibutyl-4''-(9H-carbazol-9-yl)- (9C1) (CA INDEX NAME)]

L5 ANSWER 166 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

(Continued)



LS ANSWER 167 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1987:566247 CAPLUS  
 DN 107:166247  
 TI High dielectric liquid crystal elements  
 IN Era, Susumu; Iwasaki, Kishiro; Yokokura, Hisao; Hanawa, Yasuo; Kondo, Katsumi; Nakada, Tadao; Kitamura, Teruo; Kobi, Akio  
 PA Hitachi, Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JXXXAF  
 DT Patent  
 LA Japanese  
 FAN. CNT 1

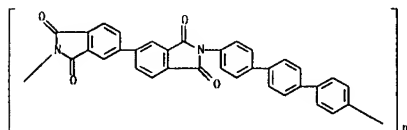
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 61231525	A	19861015	JP 1985-72642	19850408 <--
US 5020883	A	19910604	US 1988-263982	19881027 <--
PRAI JP 1985-72642	A	19850408		
US 1986-849382	B3	19860408		

AB The title element having good contrast qualities comprises a pair of opposite substrates, a device for applying an elec. field to the liquid crystal layer, a mol. orientation layer which is an organic polymer having  $\beta$ -dispersion temperature higher than the hardening temperature of the sealing material, and a sealing material such as an epoxy resin. The element is used in fabricating photoswitches and array printing heads. Thus, 3,3',4,4'-biphenyltetracarboxylic anhydride-2,5-diaminotoluene polyimide was used as a mol. orientation film in a liquid crystal element.

IT 26402-03-9  
 RL: PRP (Properties)  
 (P-dispersion temperature and contrast ratio of)

RN 26402-03-9 CAPLUS

CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)[1,1':4,1''-terphenyl]-4,4'-diyl] (9C1) (CA INDEX NAME)



LS ANSWER 168 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1987:85265 CAPLUS  
 DN 106:85265  
 TI Aromatic polyimides  
 IN Nakano, Tsunetomo; Nakajima, Kohei; Nishio, Itsusho  
 PA Ube Industries, Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JXXXAF  
 DT Patent  
 LA Japanese  
 FAN. CNT 1

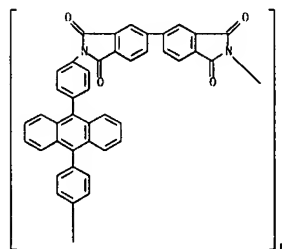
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 61195125	A	19860829	JP 1985-35335	19850226 <--
JP 04066210	B	19920205		
PRAI JP 1985-35335		19850226		

AB Soluble aromatic polyimides with high heat resistance, useful as elec. insulators, are prepared from 9,10-bis(p-aminophenyl)anthracene (I) and biphenyltetracarboxylic acid (derivative) or benzophenonetetracarboxylic acid (derivative). Thus, a mixture of 1.054 g 2,3,3',4'-biphenyltetracarboxylic dianhydride and 1.291 g 1 in 12.0 mL N-methyl-2-pyrrolidone (II) was polymerized at 20° for 5 h to give a polyamic acid (inherent viscosity 1.45), which was imidized at 50° for 2 h after the addition of (Ac)2O and pyridine in benzene to give a polyimide exhibiting good solubility in II (concentration 270% at 25°) and thermal decomposition temperature 480°.

IT 106725-35-3P 106725-36-4P  
 RL: PREP (Preparation)  
 (Soluble, heat-resistant, for elec. insulators, preparation of)

RN 106725-35-3 CAPLUS

CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)



RN 106725-36-4 CAPLUS

CN Poly[(1,1',3,3'-tetrahydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene-9,10-anthracenediyl-1,4-phenylene] (9C1) (CA INDEX NAME)

LS ANSWER 169 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

LS ANSWER 169 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1986:573730 CAPLUS  
 DN 105:173730  
 TI Resins with low thermal expansion  
 IN Numata, Shunichi; Fujisaki, Koji; Kaneshiro, Tokuyuki; Imaizumi, Junichi; Mikami, Yoshikatsu  
 PA Hitachi, Ltd., Japan; Hitachi Chemical Co., Ltd.  
 SO Jpn. Kokai Tokkyo Koho, 17 pp.  
 CODEN: JXXXAF  
 DT Patent  
 LA Japanese  
 FAN. CNT 1

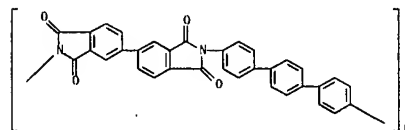
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 61060725	A	19860328	JP 1984-180549	19840831 <--
JP 07040629	B	19950501		
PRAI JP 1984-180549		19840831		

AB The title resins, useful in the manufacture of electronic devices, are oriented polyimides containing aromatic units rotating around the mol. axis and showing no flexibility in other directions. Thus, 40.31 g p-phenylenediamine in 850 g N-methyl-2-pyrrolidone was treated with 103 g 3,3',4,4'-benzophenonetetracarboxylic dianhydride at 0-50° for 5 h, cast on glass, dried 30-60 min at 80-100°, baked with or without tension at 200, 300, and 400° (1 h each), and heated at 400° to give a film (30-200  $\mu$ ) with linear thermal expansion coefficient  $0.9 \times 10^{-5}$  (under tension) and  $2.1 \times 10^{-5}$  K<sup>-1</sup> (without tension).

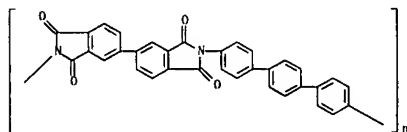
IT 26402-03-9P  
 RL: PREP (Preparation)  
 (manufacture of, with low linear thermal expansion)

RN 26402-03-9 CAPLUS

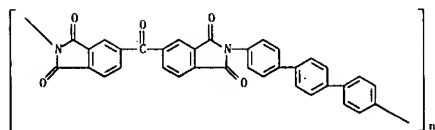
CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)[1,1':4,1''-terphenyl]-4,4'-diyl] (9C1) (CA INDEX NAME)



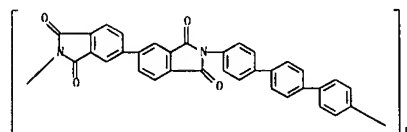
L5 ANSWER 170 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1986:130593 CAPLUS  
 DN 104:130593  
 TI Thermal expansion behavior of various aromatic polyimides  
 AU Numata, Shun'ichi; Oohara, Shuichi; Fujisaki, Koji; Imaizumi, Jun'ichi; Kinjo, Noriyuki  
 CS Hitachi Res. Lab., Hitachi Ltd., Hitachi, 319-12, Japan  
 SO Journal of Applied Polymer Science (1986), 31(1), 101-10  
 CODEN: JAPNAB; ISSN: 0021-8995  
 DT Journal  
 LA English  
 AB Expansion coeffs.  $<1 + 10^{-5} \text{ K}^{-1}$  were observed for the polyimides obtained from pyromellitic dianhydride or 3,3',4,4'-biphenyltetracarboxylic dianhydride and aromatic diamines containing only benzene rings fused at para positions. Their low thermal expansion coefficient was related to the linearity in their mol. skeletons.  
 IT 26402-03-9 83932-46-1  
 RL: PRP (Properties)  
 (thermal expansion of)  
 RN 26402-03-9 CAPLUS  
 CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)[1,1':4',1''-terphenyl]-4,4'-diyl] (9CI) (CA INDEX NAME)



RN 83932-46-1 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[1,1':4',1''-terphenyl]-4,4'-diyl] (9CI) (CA INDEX NAME)

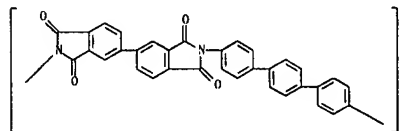


L5 ANSWER 172 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1985:579037 CAPLUS  
 DN 103:179037  
 TI Thermal expansion behavior of various aromatic polyimides  
 AU Numata, Shun'ichi; Oohara, Shuichi; Imaizumi, Jun'ichi; Kinjo, Noriyuki  
 CS Hitachi Res. Lab., Hitachi Ltd., Hitachi, 319-12, Japan  
 SO Polymer Journal (Tokyo, Japan) (1985), 17(8), 981-3  
 CODEN: POLJBB; ISSN: 0032-3896  
 DT Journal  
 LA English  
 AB The thermal expansions of p-phenylenediamine-pyromellitic dianhydride copolymer [25038-82-8], 3,3',4,4'-biphenyltetracarboxylic dianhydride-p-aminoterphenyl copolymer [55930-10-4], and 3,3',4,4'-benzophenonetetracarboxylic dianhydride-4,4'-diaminodiphenylsulfone copolymer [26873-90-5] were investigated. They were dependent whether curing shrinkage was unhindered (free cure), or prevented by fixing the film on an iron frame in one direction (unifix cure), or in 2 directions at right angles (bifix cure).  
 IT 26402-03-9  
 RL: PRP (Properties)  
 (thermal expansion coefficient of)  
 RN 26402-03-9 CAPLUS  
 CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)[1,1':4',1''-terphenyl]-4,4'-diyl] (9CI) (CA INDEX NAME)

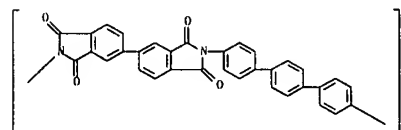


L5 ANSWER 171 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1986:99645 CAPLUS  
 DN 104:99645  
 TI Ferroelectric liquid crystal cell  
 IN Iwasaki, Kishiro; Era, Susumu; Yokokura, Hisao; Nakata, Tadao; Mukoh, Akio  
 PA Hitachi, Ltd., Japan  
 SO Eur. Pat. Appl., 20 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN CNT 1

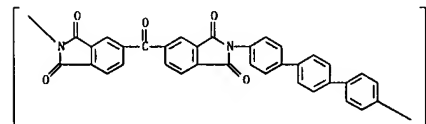
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PJ EP 160302	A2	19851106	EP 1985-105290	19850430 <-
EP 160302	A3	19881130		
EP 160302	B1	19930721		
R: CN, DE, FR, GB, IL, NL				
PRA1 JP 1984-86235	A	19840501		
JP 1984-116455	A	19840608		
AB An orientation controlling film for a ferroelec. liquid crystal display cell comprises a polyamide film prepared by ring closure (by heating and dehydrating) of a polyamic acid synthesized by condensing pyromellitic dianhydride and a diamine. Thus, 3,3',4,4'-diphenyltetracarboxylic anhydride and p-phenylenediamine were condensed in a mol. ratio 1:1 to give a polyamic acid which was then diluted to a concentration of 3.5 weight% with N-methyl-2-pyrrolidone. The obtained solution was coated on a glass supported transparent indium tin oxide electrode layer, heated at 250° for 1 h to give 80 nm thick polyamide film, and rubbed with a cloth. A display cell prepared using 2 of the above elements and p-decyloxybenzylidene-p'-amino-2-methylbutylcinnamate liquid crystal exhibited a contrast ratio of 18 (under applied voltage of 20 V). The dielec. strength of the polyimide coating was 4 + 106 V/cm.				
IT 26402-03-9				
RL: USES (Uses)				
(orientation controlling film for ferroelec. liquid crystal display devices from, preparation of)				
RN 26402-03-9 CAPLUS				
CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)[1,1':4',1''-terphenyl]-4,4'-diyl] (9CI) (CA INDEX NAME)				



L5 ANSWER 173 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1985:578752 CAPLUS  
 DN 103:178752  
 TI Thermal decomposition of various aromatic polyimides under isothermal conditions  
 AU Numata, Shunichi; Kinjo, Noriyuki  
 CS Hitachi Res. Lab., Hitachi Ltd., Hitachi, 319-12, Japan  
 SO Kobunshi Ronbunshu (1985), 42(7), 443-51  
 CODEN: KBRRA3; ISSN: 0386-2186  
 DT Journal  
 LA Japanese  
 AB The rates and activation energies for the decomposition of various polyimides in N and air are determined under isothermal conditions. Decomposition rates in N are smaller than those in air, and activation energies for decomposition in N are larger than those in air. In the case of decomposition in N, a polyimide with a higher decomposition temperature shows a larger activation energy. A linear relation exists between the bond dissociation energy for the bond with the smallest dissociation energy in the polyimide chain and the decomposition temperature  
 in N and air for various aromatic polyimides. In N the decomposition activation energies are close to the smallest value in the bond dissociation energies, and the activation energy linearly increases with the bond dissociation energy, indicating that the rate-determining process of decomposition in N is the radical cleavage at the bond which has the smallest bond dissociation energy. In the case of decomposition in air, however, no relation exists between them, indicating that the rate-determining process is not radical cleavage.  
 IT 26402-03-9 83932-46-1  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (thermal decomposition of, in air and nitrogen, kinetics and mechanism of)  
 RN 26402-03-9 CAPLUS  
 CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)[1,1':4',1''-terphenyl]-4,4'-diyl] (9CI) (CA INDEX NAME)



RN 83932-46-1 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[1,1':4',1''-terphenyl]-4,4'-diyl] (9CI) (CA INDEX NAME)



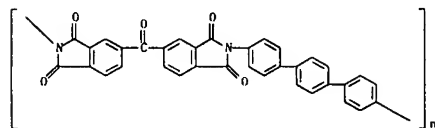
L5 ANSWER 173 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

AN 1985:221649 CAPLUS  
 UN 102:221649  
 TI Low thermal expansion resin material and composite shaped article  
 IN Numata, Shunichi; Fujisaki, Koji; Kinjo, Noriyuki; Imaizumi, Junichi;  
 Mikami, Yoshikatsu  
 PA Hitachi, Ltd., Japan; Hitachi Chemical Co., Ltd.  
 SO Eur. Pat. Appl., 49 pp.  
 CODEN: EPXXDW  
 LA Patent  
 OT English  
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 133533	A2	19850227	EP 1984-109054	19840731 <--
EP 133533	A3	19880831		
EP 133533	B1	19930421		
R: DE, FR, GB, NL				
JP 60032827	A	19850220	JP 1983-139438	19830801 <--
JP 60044338	A	19850309	JP 1983-152351	19830819 <--
US 4690999	A	19870901	US 1984-636736	19840801 <--
US 4792476	A	19881220	US 1987-77390	19870724 <--
PRAI JP 1983-139438	A	19830801		
JP 1983-152351	A	19830819		
US 1984-636736	A3	19840801		

AB Polyimides are prepared which have as a structural unit 21 aromatic ring which can rotate around its mol. axis but has no flexibility in another direction. The polyimides are oriented in 21 direction, have a low coefficient of thermal expansion, and are especially useful as flexible substrates for printed circuits and as flexible insulators for wiring, etc., in the manufacture of integrated circuits. The polyimides are prepared by the reaction of a monomer such as p-phenylenediamine (I), 4,4'-diaminoterphenyl, o-toluidine, or 2,5-diaminotoluene with a monomer such as pyromellitic dianhydride or 3,3',4,4'-biphenyltetracarboxylic dianhydride (II). Thus, 109.7 g II was added to 850 g N-methyl-2-pyrrolidone containing 40.31 g I to prepare a polyamic acid varnish which was coated on glass and dried at 80-100°. The dry film was separated from the glass, attached to a frame, cured at 200-400°, removed from the frame, and heated at 400° to remove residual strain. The film had linear expansion coefficient 0.9 × 10<sup>-5</sup>/K.

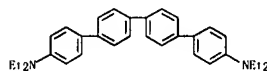
IT 83932-46-IP  
 RL: PREP (Preparation)  
 (preparation of, with low coefficient of thermal expansion)  
 RN 83932-46-1 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[1,1':4',1''-terphenyl]-4,4'-diyl] (9C1) (CA INDEX NAME)



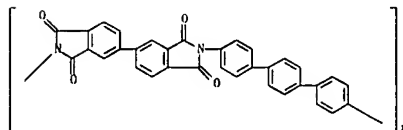
IT 26402-03-9P  
 RL: PREP (Preparation)  
 (preparation of, with low thermal expansion)  
 RN 26402-03-9 CAPLUS

L5 ANSWER 174 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1985:573732 CAPLUS  
 DN 103:173732  
 TI Evaluation of laser dye mutagenicity using the Ames/Salmonella microsome test  
 AU Wuebbles, Barbara J. Y.; Felton, James S.  
 CS Biomed. Sci. Div., Lawrence Livermore Natl. Lab., Livermore, CA, 94550, USA  
 SO Environmental Mutagenesis (1985), 7(4), 511-22  
 CODEN: ENMUDM; ISSN: 0192-2521  
 OT Journal  
 LA English  
 AB Twenty-five laser dyes and 4 analogs were tested for mutagenicity in the Ames/Salmonella test. Seven dyes and 2 analogs gave pos. mutagenic responses with bacterial strains TA1538 and TA98. Of 2 widely used families of laser dyes (coumarins and rhodamines), 4 coumarin samples, but none of the rhodamine samples, were mutagenic. All mutagenic compounds require enzyme activation for pos. response except 2 terphenyl analogs, which are mutagenic with or without activation. Using HPLC, it was determined that 5 mutagenic dye samples had multiple components. The dyes themselves may not be the mutagenic agents in all cases (as with Nile Blue [53340-16-2]) but may contain impurities that are mutagenic. One dye, indocyanomethylene (DCM) [51325-91-8] (95% pure), was mutagenic at doses <0.5 µg/plate on strains TA1538 and TA98. DCM also induced reversions in strains TA96, TA97, TA100, TA102, and TA104, although less efficiently. The mutagenic components of these dye mixts., whether it is the dye or a contaminant, presents a possible hazard to those handling them. Therefore, practices and procedures for the safe handling of specific dyes should be reviewed in light of these findings.  
 IT 53693-68-8  
 RL: ADV (Adverse effect, including toxicity); BIOL (Biological study) (mutagenicity of, in Salmonella typhimurium strains with activation by S9 fraction)  
 RN 53693-68-8 CAPLUS  
 CN [(1,1':4',1'':4'',1'''-Quaterphenyl)-4,4'''-diamine, N,N',N'',N'''-tetraethyl- (9C1) (CA INDEX NAME)]



L5 ANSWER 175 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
 CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)[1,1':4',1''-terphenyl]-4,4'''-diyl] (9C1) (CA INDEX NAME)



LS ANSWER 176 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1985:158233 CAPLUS  
 DN 102:158233  
 TI Liquid crystal guest-host systems  
 IN Scheuble, Bernhard; Weber, Georg; Pohl, Ludwig  
 PA Merck Patent G.m.b.H., Fed. Rep. Ger.  
 SO Ger. Offen., 31 pp.  
 CODEN: GWAXBX  
 DT Patent  
 LA German  
 FAN, CNT 1

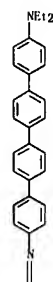
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 DE 3307238	A1	19840906	DE 1983-3307238	19830302 <--
EP 118061	A2	19840912	EP 1984-101515	19840214 <--
EP 118061	A3	19860312		
EP 118061	B1	19880914		
R: AT, CH, DE, FR, GB, IT, LI, NL				
AT 37195	T	19880915	AT 1984-101515	19840214 <--
DD 223726	A5	19850619	DD 1984-260424	19840229 <--
JP 59166580	A	19840919	JP 1984-38924	19840302 <--
US 4935160	A	19900619	US 1988-246590	19880919 <--
PRA1 DE 1983-3307238	A	19830302		
EP 1984-101515	A	19840214		
US 1984-585475	B1	19840302		

OS MARPAT 102:158233  
 AB Liquid crystal guest-host systems are described which contain  $\geq 2$  pleochroic dyes,  $\geq 1$  of which has an absorption maximum above 665 nm and the dye concentration is so controlled that an electrooptical display device containing this system shows a color range  $\Delta E$  up to the achromatic point of less than 5 units. These systems have a low viscosity and are especially useful for outdoor use. Thus, a liquid crystal mixture containing 4-(trans-4-propylcyclohexyl)benzonitrile 18, 4-(trans-4-butylcyclohexyl)benzonitrile 14, 4-(trans-4-pentylcyclohexyl)benzonitrile 25, 4-(trans-4-heptylcyclohexyl)benzonitrile 15, 4-(trans-4-pentylcyclohexyl)-4'-cyanobiphenyl 7, 4-(trans-4-pentylcyclohexyl)-4'-(trans-4-propylcyclohexyl)biphenyl 7, 4-pentyl-4'-cyanoterphenyl 6, 4-(trans-4-propylcyclohexyl)phenyl trans-4-butylcyclohexylcarboxylate 8, [C] Anthraquinone Dye Red 77 2.2, [C] Anthraquinone Dye Yellow 99 2.2, [C] Anthraquinone Dye Blue 26 0.6, and a mixture of naphthoquinone dyes prepared by reacting 4,8-diamino-1,5-naphthoquinone with equimolar amts. of 4-butoxyaniline, 4-pentylloxylaniline, 4-hexyloxylaniline, and 4-heptyloxylaniline 1.4% was prepared and placed in an electrooptical display cell. This guest-host system showed in the cell (1  $\mu$ m layer thickness) under artificial light a color range  $\Delta E$  up to the achromatic point of 0.2 and under daylight a value of 0.2.

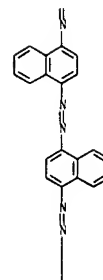
IT 95690-48-5  
 RL: USES (Uses)  
 (liquid crystal comps. containing, guest-host, for electrooptical display devices)  
 RN 95690-48-5 CAPLUS  
 CN [1,1':4',1'':4'',1''':4'''-Quaterphenyl]-4-amine, 4'''-[[4-[[4-(4-butylphenyl)azo]-1-naphthalenyl]azo]-1-naphthalenyl]azo]-N,N-diethyl- (9C1) (CA INDEX NAME)

LS ANSWER 176 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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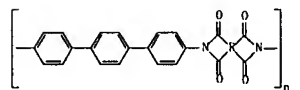
LS ANSWER 176 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 3-A



LS ANSWER 177 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1983:5217 CAPLUS  
 DN 98:5217  
 TI Potting compositions  
 PA Hitachi, Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 3 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

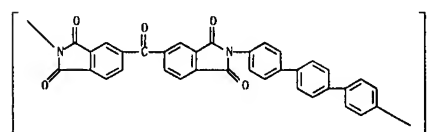
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 JP 57114258	A	19820716	JP 1981-346	19810107 <--
PRA1 JP 1981-346		19810107		



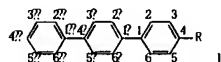
AB Polyimides (I: R = aliphatic or aromatic group) were used as moisture barriers in potting. For example, a 10% varnish from 0.1 mol 4,4'-diaminodiphenyl and 0.1 mol pyromellitic dianhydride (II) in N-methyl-2-pyrrolidone was baked on MOS-type 40-pin LSIs at 100° for 1 h and 200° for 5 h to form 4- $\mu$  barriers. The coated LSIs were potted by transfer molding with an epoxy resin and tested at 80° and 90% relative humidity for 1000 h. The failure ratio was 0/925 samples, compared with 14/50 for a control using 4,4'-diaminodiphenyl ether-II varnish.

IT 83932-46-1  
 RL: USES (Uses)  
 (moisture barriers, in epoxy potting of electronic components)

RN 83932-46-1 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)][1,1':4',1'':4'''-terphenyl]-4,4'-diyl] (9C1) (CA INDEX NAME)

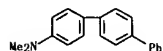


L5 ANSWER 178 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1982:122085 CAPLUS  
 DN 96:122085  
 TI Substituent parameter analysis of the carbon-13 nuclear magnetic resonance chemical shifts 4-substituted p-terphenyls  
 AU Wilson, Nancy K.; Zehr, Robert D.  
 CS EPA, Research Triangle Park, NC, 27711, USA  
 SO Journal of Organic Chemistry (1982), 47(7), 1184-8  
 CODEN JOCEAH; ISSN: 0022-3263  
 DT Journal  
 LA English  
 GI



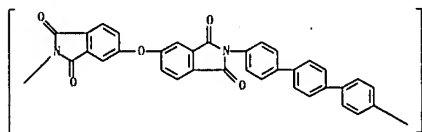
AB The effects ( $\Delta\delta$ ) of R in 1 (R = NO<sub>2</sub>, CO<sub>2</sub>Me, CN, H, Me, halo, NH<sub>2</sub>, NMe<sub>2</sub>) on the <sup>13</sup>C NMR chemical shifts were correlated with various inductive and resonance parameters via 3 models: single-parameter,  $\Delta\delta = \rho\sigma$ ; dual substituent parameter (DSP),  $\Delta\delta = \rho_I\sigma_I + \rho_R\sigma_R$ ; and nonlinear dual substituent parameter (DSP-NLR),  $\Delta\delta = \rho_I\sigma_I + \rho_R\sigma_R (1 - e^{\sigma_R})$ . No acceptable correlations were obtained for the <sup>13</sup>C shifts of C-3,5 and C-4. A single parameter,  $\sigma_{RO}$ , was adequate at only two positions, C-2',6' and C-2'',6''. At positions C-1, C-2,6, C-3',5', C-1'', C-3'',5'', and C-4'' the DSP model and  $\sigma_{RO}$  were best. At C-1' and C-4' the DSP-NLR model was best. The magnitude of the ratio  $\lambda = \rho_R/\sigma_I$  of mesomeric to inductive transmission of electronic substituent effects ranged from 0.535 to 4.58, indicating the importance of inductive electronic effects at nearly all positions, even at C-4'', where  $\lambda = 1.70$ .

IT 80583-47-7  
 RL: PRP (Properties)  
 (NMR of carbon-13 in)  
 RN 80583-47-7 CAPLUS  
 CN [1,1':4',1''-Terphenyl]-4-amine, N,N-dimethyl- (9CI) (CA INDEX NAME)

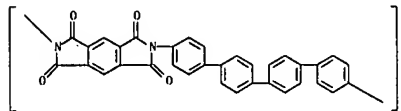


L5 ANSWER 179 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1981:175723 CAPLUS  
 DN 94:175723  
 TI Chemical structure and glass transition temperature of polyarimides  
 AU Korzhavin, L. N.; Bronnikov, S. V.; Frenkel, S. Ya.  
 CS Inst. Vysokomol. Soedin., Leningrad, USSR  
 SO Vysokomolekulyarnye Soedineniya, Seriya A (1981), 23(2), 366-74  
 CODEN VISAAP; ISSN: 0507-5475  
 DT Journal  
 LA Russian  
 AB The glass transition temperature ( $T_g$ ) was calculated for 48 aromatic polyimides using the equation of A. Askadskii and G. Slonimskii (1975) and a correlation was established between the  $T_g$  and chain flexibility and internal interactions. The critical chain flexibility was 0.67. Above this value, the  $T_g$  of the polyamides was determined wholly by internal interaction forces of adjacent chains.

IT 55919-26-1 77496-64-1 77496-65-2  
 77496-66-3 77496-67-4 77496-68-5  
 77496-69-6 77496-70-9 77496-71-0  
 77496-72-1 77509-08-1  
 RL: PRP (Properties)  
 (glass transition temperature of, chain flexibility and intermol. interaction in relation to)  
 RN 55919-26-1 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)][1,1':4',1''-terphenyl]-4,4'-diyl (9CI) (CA INDEX NAME)



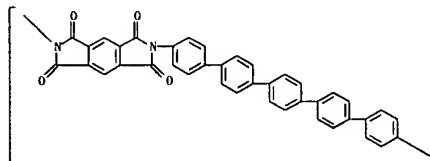
RN 77496-64-1 CAPLUS  
 CN Poly[(5,7-dihydro-1,3,5,7-tetraoxobenzo[1,2-c:4,5-c']dipyrrole-2,6(1H,3H)-diyl)][1,1':4',1''-quaterphenyl]-4,4'-diyl (9CI) (CA INDEX NAME)



RN 77496-65-2 CAPLUS  
 CN Poly[(5,7-dihydro-1,3,5,7-tetraoxobenzo[1,2-c:4,5-c']dipyrrole-2,6(1H,3H)-diyl)][1,1':4',1''-4',1'''-quinquephenyl]-4,4'-diyl (9CI) (CA INDEX NAME)

L5 ANSWER 179 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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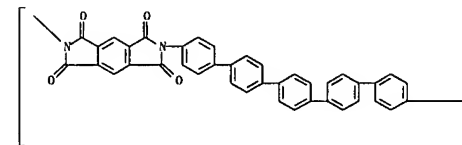


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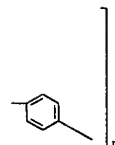
RN 77496-66-3 CAPLUS  
 CN Poly[(5,7-dihydro-1,3,5,7-tetraoxobenzo[1,2-c:4,5-c']dipyrrole-2,6(1H,3H)-diyl)][1,1':4',1''-4',1'''-sexiphenyl]-4,4'-diyl (9CI) (CA INDEX NAME)

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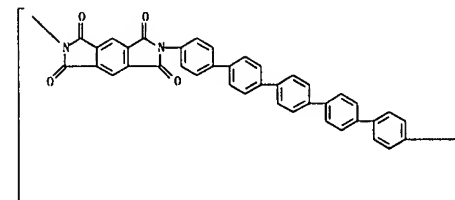
L5 ANSWER 179 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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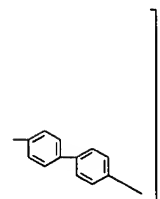


RN 77496-67-4 CAPLUS  
 CN Poly[(5,7-dihydro-1,3,5,7-tetraoxobenzo[1,2-c:4,5-c']dipyrrole-2,6(1H,3H)-diyl)][1,1':4',1''-4',1'''-sepiaphenyl]-4,4'-diyl (9CI) (CA INDEX NAME)

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RN 77496-68-5 CAPLUS

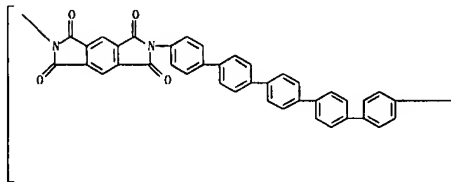


L5 ANSWER 179 OF 201 CAPLUS COPYRIGHT 2007 ACS ON STN (Continued)  
CN Poly[(5,7-dihydro-1,3,5,7-tetraoxobenz[*b*,2*c*:4,5-*c'*]dipyrrole-2,6(1H,3H)-diyl)[1,1':4'',1'':4''':4'''':4'''':4''']-[octaphenyl]-4,4'-diyl] (9C1) (CA INDEX NAME)

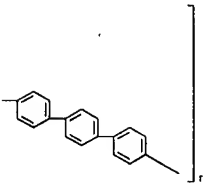
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PAGE 1-A

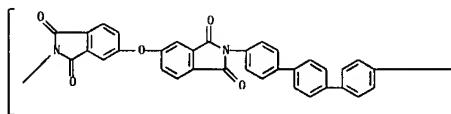


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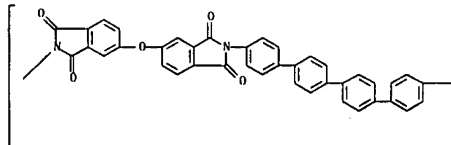
RN 77496-69-6 CAPLUS  
CN Poly([1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diyl) (9CI) (CA INDEX NAME)

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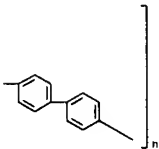


L5 ANSWER 179 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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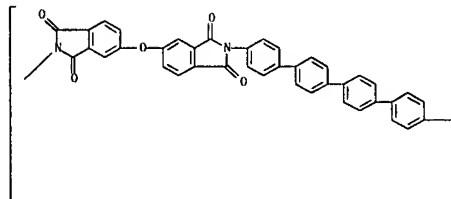


PAGE 1-B



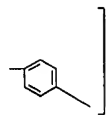
RN 77496-72-1 CAPLUS  
CN Poly(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[1,1'-4',1'':4'',1''':4'''',1''':4''',1''':4''']-septiphenyl]-4,4'-diyl] (9C1) (CA INDEX NAME)

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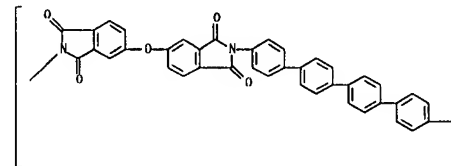
15 ANSWER 179 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-B

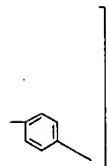


RN 77496-70-9 CAPI.US  
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[1,1':4'',1'':4'',1'':4'',1'':4'',1'':4''-quinquephenyl]-4,4'',4'''-diyl] (9C1) (CA INDEX NAME)

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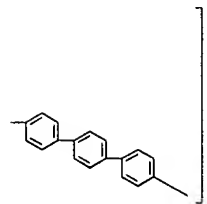
PAGE 1-B



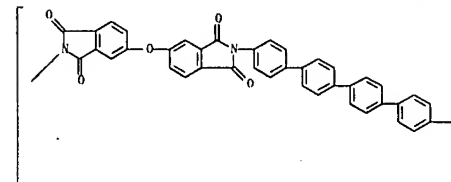
RN 77496-71-0 CAPLUS  
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindeole-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isoindeole-5,2-diyl)]{[1,1':4',1'' :4'',1' :4''' :4''']  
sexiphenyl]-4,4'-diyl} (9CI) (CA INDEX NAME)

1.5 ANSWER 179 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-B

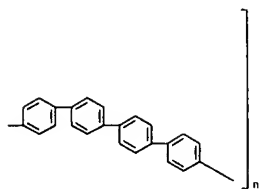
[illegible]

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L5 ANSWER 179 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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L5 ANSWER 180 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1980:558114 CAPLUS

DN 93:158114

T1 Formation of intramolecular exciplexes in electrogenerated chemiluminescence. 2

AU Kawai, Mikio; Itoya, Kingo; Toshima, Shinobu

CS Fac. Eng., Tohoku Univ., Sendai, 980, Japan

SO Journal of Physical Chemistry (1980), 84(19), 2368-74

CODEN: JPCHEX; ISSN: 0022-3654

DT Journal

LA English

AB Electrogenerated chemiluminescence (ecl) of intramol. donor-acceptor compds. was examined in acetonitrile and acetonitrile-benzene mixts. Anthracene, 10-phenylanthracene, and pyrene rings were directly bonded to N,N-dimethylaniline, N,N-di-p-tolylaniline, and N,N-di-p-anisylaniline. High values of ecl yields were obtained in this series of compds. The time dependence of ecl emission intensity of N,N-di-p-anisylaniline deriva. revealed that the reaction mechanism was S route (direct population of the singlet states of intramol. exciplexes).

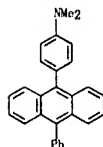
IT 71901-29-6 74296-02-9 74296-03-0

RL: PREP (Properties)

(electrochemiluminescence of, in acetonitrile and acetonitrile-benzene mixts.)

RN 71901-29-6 CAPLUS

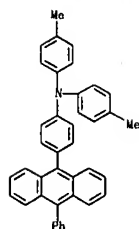
CN Benzenamine, N,N-dimethyl-4-(10-phenyl-9-anthracenyl)- (9C1) (CA INDEX NAME)



RN 74296-02-9 CAPLUS

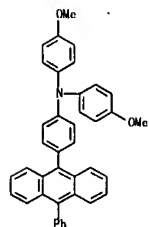
CN Benzenamine, N,N-bis(4-methylphenyl)-4-(10-phenyl-9-anthracenyl)- (9C1) (CA INDEX NAME)

L5 ANSWER 180 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 74296-03-0 CAPLUS

CN Benzenamine, N,N-bis(4-methoxyphenyl)-4-(10-phenyl-9-anthracenyl)- (9C1) (CA INDEX NAME)



L5 ANSWER 181 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1980:471259 CAPLUS

DN 93:71259

T1 p,p'-Bis-quaternary ammonium salts of p-terphenyl

IN Khrenov-Borisov, Nikolai V.; Torf, Samuil F.; Cherapanova, Valentina P.;

Danilov, Anatoly F.

PA Institute of Experimental Medicine, Academy of Medical Sciences, U.S.S.R., USSR

SO Can., 26 pp.

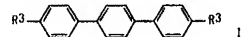
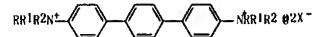
CODEN: CAXX44

DT Patent

LA English

FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI CA 1072964	A1	19800304	CA 1976-252143	19760510 <--
PRA1 CA 1976-252143	A	19760510		
GI				



AB Ammonium salts of p-terphenyl (I; R = alkyl; R1 = R2 = alkyl; R1R2 = alkylene; X = PhSO3, halide) were prepared. Thus, reduction of II (R3 = NO2) by Raney Ni followed by alkylation with EtI gave I (R3 = NEt2; (III)). Treating III with PhSO3Et at 120° for 1 h gave I (R = R1 = R2 = Et, X = PhSO3; IV) which was treated with NaBr to give I (X = Br; V). IV and V were 6-8 times more effective as neuromuscular blocking agents than d-tubocurarine.

IT 65449-04-9P 65449-06-1P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and muscle relaxant and neuromuscular blocking activity of)

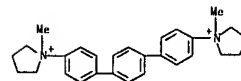
RN 65449-04-9 CAPLUS

CN Pyrrolidinium, 1,1'-[1,1':4',1''-terphenyl]-4,4''-diylbis[1-methyl-, dibenzenesulfonate (9C1) (CA INDEX NAME)

CM 1

CRN 65449-03-8

CMF C28 H34 N2



CM 2

CRN 3198-32-1

CMF C6 H5 O3 S

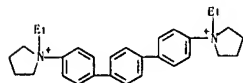
L5 ANSWER 181 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 65449-06-1 CAPLUS  
CN Pyrrolidinium, 1,1'-[1,1':4',1''-terphenyl]-4,4''-diylbis[1-ethyl-,  
dibenzenesulfonate (9C1) (CA INDEX NAME)

CM 1

CRN 65449-05-0  
CMF C30 H38 N2

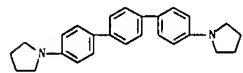


CM 2

CRN 3198-32-1  
CMF C6 H5 O3 S

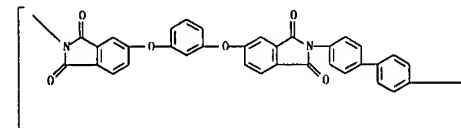


IT 65449-09-4P  
RL: RCT (Reactant): SPN (Synthetic preparation): PREP (Preparation): RACT  
(Reactant or reagent)  
(preparation and quaternization of)  
RN 65449-09-4 CAPLUS  
CN Pyrrolidine, 1,1'-[1,1':4',1''-terphenyl]-4,4''-diylbis- (9C1) (CA INDEX  
NAME)

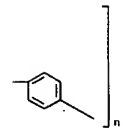


L5 ANSWER 182 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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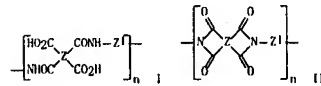
L5 ANSWER 182 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1980:448413 CAPLUS  
DN 93:48413  
TI Method for obtaining polyimide fibers  
IN Koton, M. M.; Florinsky, F. S.; Frenkel, S. Y.; Korzhavin, L. N.;  
Pushkina, T. P.; Prokopchuk, N. R.  
PA Institute of High-Molecular-Weight Compounds, Academy of Sciences,  
U.S.S.R., USSR  
SO Brit. UK Pat. Appl., 7 pp.  
CODEN: BAXXDU

DT Patent  
LA English

FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI GB 2025311	A	19800123	GR 1978-30083	19780717 <--
GB 2025311	R	19820825		
PRA1 GB 1978-30083	A	19780717		
GI				



AB Polyimide fibers resistant to heat, frost, burning, UV, and corrosive  
chemicals, are manufactured by solution spinning of the corresponding polyamic acid I  
(Z = residue of aromatic tetracarboxylic acid or dianhydride; Z' = residue of  
aromatic diamine; n = 2-80), drawing the as-spun fibers to a ratio of 1.3-4  
at 20-70° and heating the drawn fibers at 5-100° above  
their T<sub>g</sub> to effect dehydrocyclization to the polyimide II. Thus, a 13.7%  
DMF solution of the polyamic acid [51396-15-7] prepared from  
2,6-diaminofluorene and pyromellitic anhydride was extruded through a  
0.54-mm-diameter spinneret into an ethylene glycol precipitation bath at 20°.  
The spun fiber was drawn to a ratio 2.5 in water at 20° and vacuum  
dried at 50° and 110-50 mm Hg. The dried fiber was heated at  
440° under N to effect cyclization to the corresponding polyimide  
[33850-34-9]. The polyimide fiber had tenacities 110, 140, and 30 gF/tex,  
break elongations 1.6, 1.3, and 0.7%, and elasticity modulus 1300, 16,000,  
and 6200 kgF/mm<sup>2</sup> at 20, -196, and 450°, resp.

IT 73342-35-5P

RL: PREP (Preparation)

(fibers, heat-resistant, manufacture of)

RN 73342-35-5 CAPLUS  
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isindole-2,5-diyl)oxy-1,3-phenyleneoxy(1,3-  
dihydro-1,3-dioxo-2H-isindole-5,2-diyl)[1,1':4',1''-terphenyl]-4,4''-  
diyl] (9C1) (CA INDEX NAME)

L5 ANSWER 183 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1980:148407 CAPLUS  
DN 92:148407  
TI Polyimide yarns  
IN Koton, M. M.; Florinskii, F. S.; Frenkel, S. Ya.; Korzhavin, L. N.;  
Pushkina, T. P.; Prokopchuk, N. R.  
PA Institute of High-Molecular-Weight Compounds, Academy of Sciences,  
U.S.S.R., USSR  
SO Ger. Offen., 30 pp.  
CODEN: GWXXBX

DT Patent

LA German

FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 2829811	A1	19800124	DE 1978-2829811	19780706 <--
JP 57037687	B	19820811	JP 1978-87217	19780719 <--
JP 55016925	A	19800206		
PRA1 DE 1978-2829811	A	19780706		

AB Polyimide fibers with good mech. properties, especially modulus of elasticity  
and strength, are prepared by controlling the stretching and heat treatment  
conditions and using polyimide acids prepared from aromatic tetracarboxylic  
acid anhydrides and aromatic diamines. Thus, a DMF solution of  
p-phenylenediamine was treated with an equimolar amount of  
3,3',4,4'-diphenyl oxide tetracarboxylic acid dianhydride to give yellow  
solution of a polyimide acid containing 17% solids and having intrinsic viscosity  
1.8 dL/g. After filtration and degassing, the solution was extruded through  
a 40 hole nozzle with 0.1-mm-diameter orifices into a 90:10 EtOH-water bath  
at 20°. The fibers were stretched 1.3-fold in water at 50°  
vacuum dried at 50° and 100-50 torr, and dehydrocyclized in N at  
410°. The polyimide fibers obtained had tensile strength 140  
g/tex, breaking elongation 1.6%, and modulus of elasticity 10,800 kg/mm<sup>2</sup>.

IT 73342-35-5

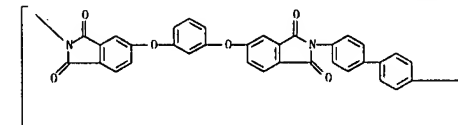
RL: USES (Uses)

(fiber, with increased modulus of elasticity and tensile strength)

RN 73342-35-5 CAPLUS

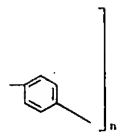
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isindole-2,5-diyl)oxy-1,3-phenyleneoxy(1,3-  
dihydro-1,3-dioxo-2H-isindole-5,2-diyl)[1,1':4',1''-terphenyl]-4,4''-  
diyl] (9C1) (CA INDEX NAME)

PAGE 1-A



L5 ANSWER 183 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

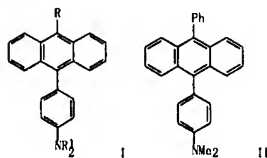
PAGE 1-B



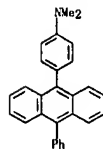
L5 ANSWER 184 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1979:602278 CAPLUS  
 DN 91:202278  
 TI Electrochemiluminescent display devices  
 IN Yamazaki, Shoji  
 PA Daini Seikosha Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 2 pp.  
 CODEN: JRXKAF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 54071090	A	19790607	JP 1977-137574	19771116 <--
PRAI	JP 1977-137574	A	19771116		
GI					



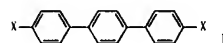
AB Electrochemiluminescent display devices contain organic electrochemiluminescent substances of the general formula I (R, R1 = alkyl, aryl). Thus, an electrolyte solution containing II 10-3 and [Bu4N]ClO4 0.1M was used to give an electrochemiluminescent display device which gave a bright yellowish green emission and had good durability.  
 IT 71901-29-6  
 RL: USES (Uses)  
 (electrochemiluminescent display devices containing)  
 RN 71901-29-6 CAPLUS  
 CN Benzenamine, N,N-dimethyl-4-(10-phenyl-9-anthracenyl)- (9C1) (CA INDEX NAME)



L5 ANSWER 184 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

L5 ANSWER 185 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

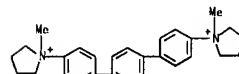
AN 1979:574926 CAPLUS  
 DN 91:174926  
 TI Synthesis and curarlike activity of p,p'-bis-quaternary ammonium derivatives of p-terphenyl  
 AU Khromov-Borisov, N. V.; Torf, S. F.; Cherapanova, V. P.; Danilov, A. F.  
 CS Nauchno-Issled. Inst. Eksp. Med., Leningrad, USSR  
 SO Khimiko-Farmatsevticheskii Zhurnal (1979), 13(7), 34-9  
 CODEN: KHJZAN; ISSN: 0023-1134  
 DT Journal  
 LA Russian  
 OS CASREACT 91:174926  
 GI



AB p,p'-Dinitro-p-terphenyl (I: X = NO2) in HOCH2CH2OH was reduced with N2H4.H2O in the presence of Raney Ni at 165-70° to give a quant. yield of I (X = NH2), which reacted with R1 (R = Et, Pr) and with Br(CH2)nBr (n = 4, 5) to give the corresponding I (X = NEt2, NPr2, pyrrolidino, piperidino). These diamines were quaternized with PhSO3R1 (R1 = Me, Et) to give 70-80% I PhSO3- (X = Et2NMe+, Et3N+, Pr2NMe+, N-methyl- and N-ethylpyrrolidino and -piperidino), which are depolarizing myorelaxants comparable to d-tubocurarin in activity.  
 IT 65449-04-9P 65449-06-1P 71666-27-8P  
 71666-29-0P  
 RL: SYN (Synthetic preparation); PREP (Preparation)  
 (preparation and curarin-like activity of)  
 RN 65449-04-9 CAPLUS  
 CN Pyrrolidinium, 1,1'-[1,1':4',1''-terphenyl]-4,4''-diylbis[1-methyl-, dibenzenesulfonate (9C1) (CA INDEX NAME)

CM 1

CRN 65449-03-8  
 CMF C28 H34 N2



CM 2

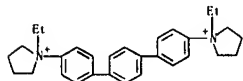
CRN 3198-32-1  
 CMF C6 H5 O3 S



L5 ANSWER 185 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
 RN 65449-06-1 CAPLUS  
 CN Pyrrolidinium, 1,1'-[1,1':4',1''-terphenyl]-4,4''-diylbis[1-ethyl-,  
 dibenzenesulfonate (9C1) (CA INDEX NAME)

CM 1

CRN 65449-05-0  
 CMF C30 H38 N2



CM 2

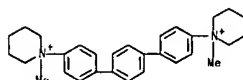
CRN 3198-32-1  
 CMF C6 H5 O3 S



RN 71666-27-8 CAPLUS  
 CN Piperidinium, 1,1'-[1,1':4',1''-terphenyl]-4,4''-diylbis[1-methyl-,  
 dibenzenesulfonate (9C1) (CA INDEX NAME)

CM 1

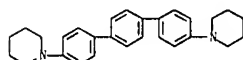
CRN 71666-26-7  
 CMF C30 H38 N2



CM 2

CRN 3198-32-1  
 CMF C6 H5 O3 S

L5 ANSWER 185 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



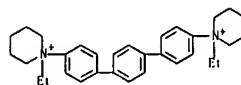
L5 ANSWER 185 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 71666-29-0 CAPLUS  
 CN Piperidinium, 1,1'-[1,1':4',1''-terphenyl]-4,4''-diylbis[1-ethyl-,  
 dibenzenesulfonate (9C1) (CA INDEX NAME)

CM 1

CRN 71666-28-9  
 CMF C32 H42 N2

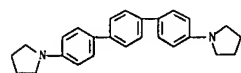


CM 2

CRN 3198-32-1  
 CMF C6 H5 O3 S



IT 65449-09-4P 71666-25-6P  
 RL: RCT (Reactant): SPN (Synthetic preparation); PREP (Preparation): RACT  
 (Reactant or reagent)  
 (preparation and quaternization of, with alkyl benzenesulfonates)  
 RN 65449-09-4 CAPLUS  
 CN Pyrrolidine, 1,1'-[1,1':4',1''-terphenyl]-4,4''-diylbis- (9C1) (CA INDEX  
 NAME)



RN 71666-25-6 CAPLUS  
 CN Piperidine, 1,1'-[1,1':4',1''-terphenyl]-4,4''-diylbis- (9C1) (CA INDEX  
 NAME)

L5 ANSWER 186 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1979:508523 CAPLUS

DN 91:108523

TI Thermal and oxidative thermal degradation of rigid-chain polyimides

AU Sazanov, Yu. N.; Florinskii, F. S.; Fedorova, G. N.; Koton, M. M.

CS Inst. Vysokomol. Soedin., Leningrad, USSR

SO Vysokomolekulyarnye Soedineniya, Seriya B: Kratkie Soobshcheniya (

1979), 21(6), 463-7

COBEN: VYSBA1; ISSN: 0507-5483

DT Journal

LA Russian

AB The chemical nature of the acid and diamine components of rigid-chain polyimides affects their thermal and oxidative thermal degradation, as was confirmed by DTA and thermogravimetric anal. Degradation of films and fibers from polyimides based on pyromellitic dianhydride, biphenyl- and oxybiphenyltetracarboxylic acids, and various diamines was examined by DTA and thermogravimetric anal. Thermal stability of the polyimides increased with increasing number of phenylene units in the polymer chain. Polyimides based on diamines of fluorene and phenoxthine had a high oxidative thermal stability. The high thermal stability and deformation-strength properties of fluorene-containing polyimides was attributed to their high crystallinity and increased intermol. interaction of cyclic groups. The higher temperature of oxidative thermal degradation of fibers compared to films was attributed to the effects of uniaxial orientation.

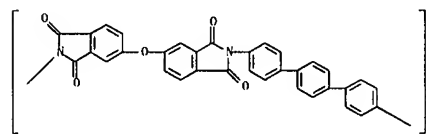
IT 55919-26-1

RL: PRP (Properties)

(oxidative thermal and thermal degradation of)

RN 55919-26-1 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)][1,1':4',1''-terphenyl]-4,4''-diyl] (9C1) (CA INDEX NAME)



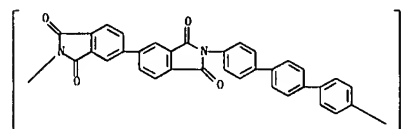
IT 26402-03-9

RL: PRP (Properties)

(thermal and oxidative thermal degradation of)

RN 26402-03-9 CAPLUS

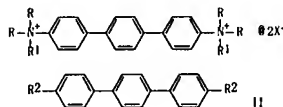
CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)][1,1':4',1''-terphenyl]-4,4''-diyl] (9C1) (CA INDEX NAME)



L5 ANSWER 186 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

L5 ANSWER 187 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1978:442749 CAPLUS  
 DN 89:42749  
 TI N,N'-Bisquaternary ammonium salts of p-terphenyldiamine  
 PA Institute of Experimental Medicine, Academy of Medical Sciences, U.S.S.R., USSR  
 SO Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JXXXXF  
 DT Patent  
 LA Japanese  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 52142048	A	19771126	JP 1976-59208	19760524 <--
PRAI JP 55042064	B	19801028		
GI JP 1976-59208	A	19760524		

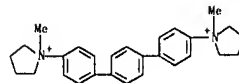


AB Bisquaternary ammonium salts [I; R, R1 = alkyl, RR = (CH2)4; X = PhSO3, halo] were prepared by quaternization of the diamines (II; R2 = NH2), which were obtained by reduction of the nitro compds. (II; R2 = NO2). I were effective muscle relaxants. Thus, 10 g I (R2 = NO2) in HOCH2CH2OH was reduced with Raney Ni to give quant. II (R2 = NH2), which (1.7 g) was treated with 5 ml MeI and 2.2 g CaCO3 in HOCH2CH2OH to give 2 g mixture of I (R = R1 = Me, X = iodo) and II (R2 = NMe2), which was treated with PhSO3Me at 100-20° to give 80% I (R = R1 = Me, X = PhSO3), which showed a head-drop dose of 0.25 ± 0.05 MKM (sic)/kg in rabbits, vs. 0.18 ± 0.06 MKM (sic)/kg from d-tubocurarine.

IT 65449-04-9P 65449-06-1P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and muscle relaxant activity of)  
 RN 65449-04-9 CAPLUS  
 CN Pyrrolidinium, 1,1'-[1,1':4',1''-terphenyl]-4,4''-diylbis[1-methyl-, dibenzenesulfonate (9CI) (CA INDEX NAME)]

CM 1

CRN 65449-03-8  
 CMF C28 H34 N2



L5 ANSWER 187 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

CM 2

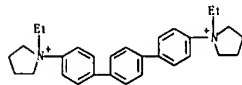
CRN 3198-32-1  
 CMF C6 H5 O3 S



RN 65449-06-1 CAPLUS  
 CN Pyrrolidinium, 1,1'-[1,1':4',1''-terphenyl]-4,4''-diylbis[1-ethyl-, dibenzenesulfonate (9CI) (CA INDEX NAME)]

CM 1

CRN 65449-05-0  
 CMF C30 H38 N2



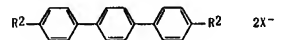
CM 2

CRN 3198-32-1  
 CMF C6 H5 O3 S



L5 ANSWER 188 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1978:62132 CAPLUS  
 DN 88:62132  
 TI p,p'-Bisquaternary-p-terphenylammonium salts  
 IN Khromov-Borisov, N. V.; Torf, S. F.; Cherepanova, V. P.; Danilov, A. F.  
 PA Institute of Experimental Medicine, Academy of Medical Sciences, U.S.S.R., USSR  
 SO Ger. Offen., 28 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 2621226	A1	19771117	DE 1976-2621226	19760513 <--
DE 2621226	C3	19800918		
PRAI DE 1976-2621226	A	19760513		
OS MARPAT 88:62132				
GI				

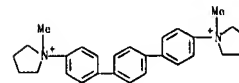


AB The title compds. I [R2 = N+R2R1, 1-R1-substituted-pyrrolidinio (R and R1 = alkyl, especially lower alkyl; X = PhSO3, halo) were claimed. Thus, e.g., p-(4-O2NC6H4)2C6H4 in (HOCH2)2 was reduced with N2H4 and Raney Ni (quant. yield), the formed p-(4-H2NC6H4)2C6H4 alkylated with MeI in (HOCH2)2 and the mixture of p-(4-(Me2NC6H4)2)C6H4 and I (R2 = N+Me3, X = iodo) thus obtained treated with PhSO3Me to give 80% I (R2 = N+Me3, X = PhSO3). An addnl. 6 I were prepared I were muscle relaxants at 0.08 ± 0.002 to 1.0 ± 0.2 µmol/kg (cat, blocking dose) and 0.022 ± 0.001 to 0.3 ± 0.06 µmol/kg (rabbit, head drop dose), whereas d-tubocurarine required dosages of 0.5 ± 0.02 and 0.18 ± 0.06, resp.

IT 65449-04-9P 65449-06-1P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and muscle relaxant activity of)  
 RN 65449-04-9 CAPLUS  
 CN Pyrrolidinium, 1,1'-[1,1':4',1''-terphenyl]-4,4''-diylbis[1-methyl-, dibenzenesulfonate (9CI) (CA INDEX NAME)]

CM 1

CRN 65449-03-8  
 CMF C28 H34 N2



CM 2

CRN 3198-32-1  
 CMF C6 H5 O3 S

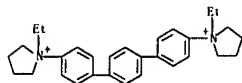
L5 ANSWER 188 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 65449-06-1 CAPLUS  
CN Pyrrolidinium, 1,1'-[1,1':4',1''-terphenyl]-4,4''-diylbis[1-ethyl-, dibenzenesulfonate (9C1) (CA INDEX NAME)

CM 1

CRN 65449-05-0  
CMF C30 H38 N2

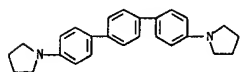


CM 2

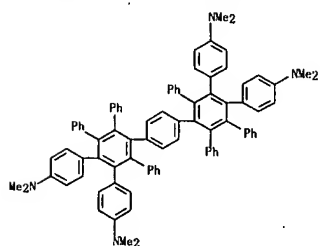
CRN 3198-32-1  
CMF C6 H5 O3 S



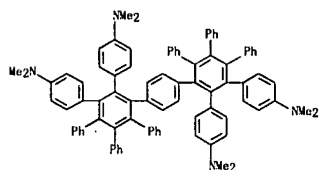
IT 65449-09-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and quaternization of, with alkyl benzenesulfonates)  
RN 65449-09-4 CAPLUS  
CN Pyrrolidine, 1,1'-[1,1':4',1''-terphenyl]-4,4''-diylbis- (9C1) (CA INDEX NAME)



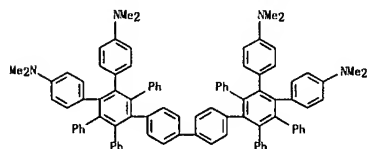
L5 ANSWER 189 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 62063-76-7 CAPLUS  
CN [1,1':2',1''-Terphenyl]-4,4''-diamine, 4',4'''-[3',5',6'-bis[4-(dimethylamino)phenyl]-N,N,N',N'-tetramethyl-2',2'',4',5',5'',6''-hexaphenyl- (9C1) (CA INDEX NAME)



RN 62063-81-4 CAPLUS  
CN [1,1':2',1''-Terphenyl]-4,4''-diamine, 4',4'''-[3',5',6'-bis[4-(dimethylamino)phenyl]-N,N,N',N'-tetramethyl-2',2'',4',5',5'',6''-hexaphenyl- (9C1) (CA INDEX NAME)



RN 62063-86-9 CAPLUS  
CN [1,1':2',1''-Terphenyl]-4,4''-diamine, 4',4'''-[3',5',6'-bis[4-(dimethylamino)phenyl]-N,N,N',N'-tetramethyl-2',2'',4',5',5'',6''-hexaphenyl- (9C1) (CA INDEX NAME)

L5 ANSWER 189 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1977:120899 CAPLUS  
DN 86:120899  
TI Synthesis and electronic spectra of substituted bis(hexaphenylbenzenes)  
AU Harvey, James A.; Ogliaruso, Michael A.  
CS Dep. Chem., Virginia Polytech. Inst., Blacksburg, VA, USA  
SO Journal of Chemical and Engineering Data (1977), 22(1), 110-13  
CODEN: JCEAAX; ISSN: 0021-9568

DT Journal

LA English

GI For diagram(s), see printed CA Issue.

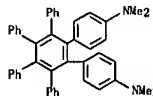
AB The Diels-Alder reaction of tetracyclone with diphenylacetylenes I (R = Me, OMe, Cl, NMe2, NO2) gave hexaphenylbenzenes II; UV data were obtained. Caution: there was a CO pressure build-up. Similarly, various bis(tetracyclones) and I gave quinquophenyls III (R = Me, OMe, Cl, NMe2, NO2 when R1 = H; R1 = Me, OMe, Cl, NMe2, NO2 when R = H) and seventeen bis(hexaphenylbenzenes) IV (Z = direct bond, CH2, O, S; R = Me, OMe, Cl, NMe2, NO2); UV data were also given for III and IV.

IT 23107-24-6P 62063-71-2P 62063-76-7P  
62063-81-4P 62063-86-9P 62063-90-5P  
62063-94-9P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and UV of)

RN 23107-24-6 CAPLUS

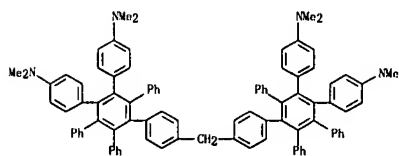
CN [1,1':2',1''-Terphenyl]-4,4''-diamine, N,N,N',N'-tetramethyl-3',4',5',6'-terphenyl- (9C1) (CA INDEX NAME)



RN 62063-71-2 CAPLUS

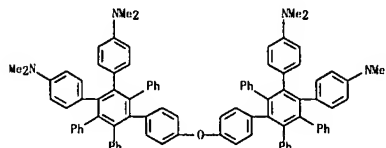
CN [1,1':3',1''-Terphenyl]-4,4''-diamine, 4',4'''-[3',5',6'-bis[4-(dimethylamino)phenyl]-N,N,N',N'-tetramethyl-2',2'',4',5',5'',6''-hexaphenyl- (9C1) (CA INDEX NAME)

L5 ANSWER 189 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



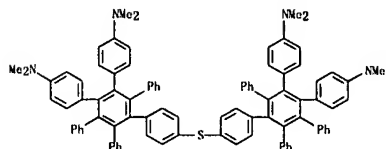
RN 62063-90-5 CAPLUS

CN [1,1':2',1''-Terphenyl]-4,4''-diamine, 4',4'''-[3',5',6'-bis[4-(dimethylamino)phenyl]-N,N,N',N'-tetramethyl-2',2'',4',5',5'',6''-hexaphenyl- (9C1) (CA INDEX NAME)



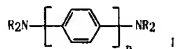
RN 62063-94-9 CAPLUS

CN [1,1':2',1''-Terphenyl]-4,4''-diamine, 4',4'''-[3',5',6'-bis[4-(dimethylamino)phenyl]-N,N,N',N'-tetramethyl-2',2'',4',5',5'',6''-hexaphenyl- (9C1) (CA INDEX NAME)

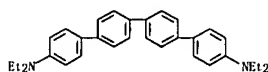


L5 ANSWER 190 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1976:137229 CAPLUS  
 DN 84:137229  
 TI Lasing dye  
 IN Hammond, Peter R.  
 PA United States Dept. of the Navy, USA  
 SO U. S. Pat. Appl., 10 pp. Avail. NTIS  
 CODEN: XAXXAV  
 DT Patent  
 LA English  
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 572590	AO	19750428	US 1975-572590	19750428 <-
PRA1 US 1975-572590		19750428		
G1				



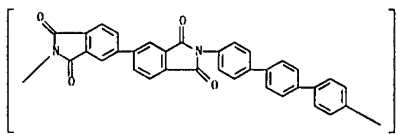
AB Polyphenyls (I, R = H, Et, n = 3, 4), lasing in the transmission region of sea water, were prepared by nitraling p-terphenyl [92-94-4] or p-quaterphenyl [135-70-6] in HOAc with fuming HNO3, refluxing the dinitro derivative with SnCl2, HCl, and HOAc, and forming the tetraethyl derivative by treatment of I (R = H) with triethyl phosphate.  
 IT 53693-68-8  
 RL: USES (Uses)  
 (dye, for lasing in transmission region of sea water)  
 RN 53693-68-8 CAPLUS  
 CN [1,1':4',1'':4'',1''':4''',1''':4'''-Quaterphenyl]-4,4'''-diamine, N,N,N',N'-tetraethyl- (9C1) (CA INDEX NAME)



L5 ANSWER 191 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1975:459583 CAPLUS  
 DN 83:59583  
 TI Thermogravimetric study of the effect of the chemical structure of polyimides on their thermal stability  
 AU Koton, M. M.; Sazanov, Yu. N.  
 CS Inst. Macromol. Compounds, Leningrad, USSR  
 SO Journal of Thermal Analysis (1975), 7(1), 165-71  
 CODEN: JTHEA9; ISSN: 0368-4466  
 DT Journal  
 LA English

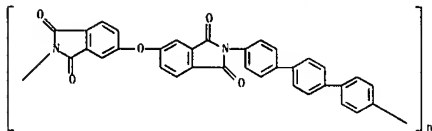
AB The thermal stability of polyimides based on dianhydrides of pyromellitic acid, diphenyl, and oxydiphenyltetracarboxylic acids, and a series of aromatic diamines depended on the structure of the diamine component and the influence of structure decreases as the rigidity of the structure, and degree of ring fusion increase. Polymers with aliphatic units in the diamine component had the lowest thermal stability. Replacement of a (CH2)6 chain by a tolyl group increased the thermal stability. As the structure of the polyimides was saturated with aromatic and heterocyclic units, the thermal stability progressively increased. Polypyromellitimides containing diphenyl, terphenyl, oxydiphenyl, benzophenone, and phenoxthine groups in the diamine component had a high thermal stability in the range 370-420° and polyimides with a phenoxthine group in the diamine component had the highest thermal stability. For rigid-chain polyimides stable at 350° thermal degradation began at the weak points or bonds which were independent of the chemical structure of the diamine or dianhydride components.

IT 26402-03-9 55919-26-1  
 RL: PRP (Properties)  
 (thermal stability of)  
 RN 26402-03-9 CAPLUS  
 CN Poly[[1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-indole]-2,2'-diyl][1,1':4',1'':4''-terphenyl]-4,4''-diyl] (9C1) (CA INDEX NAME)



RN 55919-26-1 CAPLUS  
 CN Poly[[1,3-dihydro-1,3-dioxo-2H-indole-2,5-diyl]oxy(1,3-dihydro-1,3-dioxo-2H-indole-5,2-diyl)[1,1':4',1'':4''-terphenyl]-4,4''-diyl] (9C1) (CA INDEX NAME)

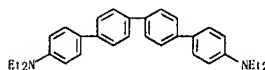
L5 ANSWER 191 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



L5 ANSWER 192 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1975:24115 CAPLUS  
 DN 82:24115  
 TI Spectroscopic studies of some laser dyes  
 AU Pavlopoulos, T. G.; Hammond, P. R.  
 CS Nav. Electron. Lab. Cont., San Diego, CA, USA  
 SO Journal of the American Chemical Society (1974), 96(21), 6568-79  
 CODEN: JACSAT; ISSN: 0002-7863  
 DT Journal  
 LA English

AB The chief parameters determining laser action of organic dyes are discussed. A favorable constellation in a chromophore to convert it into a potential laser dye is an auxochromic-group-substituted compound showing only small triplet-triplet (T-T) absorption over its fluorescence region. T-T laser photoselection spectroscopy is a valuable tool for obtaining polarization data on T-T absorption bands. The S-S absorption, fluorescence, and T-T absorption and polarization spectra of p-terphenyl, p-quaterphenyl, PPO, 2,5-bis(4-biphenyl)oxazole, POPOP, and 2-(1-naphthyl)-5-phenyloxazole were measured. T-T absorption and polarization spectra indicates that an improvement in laser action should occur when they are para-substituted by auxochromes. p,p'-Diamino- and p,p'-N,N,N',N'-tetraethylidiaminoterphenyl, p,p'-diamino- and p,p'-N,N,N',N'-tetraethylidiaminoquaterphenyl, and p,p'-dibutoxy-POPOP were synthesized. Their T-T absorption showed remarkably large red shifts; moreover, the bands for the aminoalkylphenylenes were very broad. This indicates nonplanarity of higher triplet states. Out-of-plane mol. electronic states reduce quantum fluorescence yield. To improve laser performance, ways to render the mol. coplanar are presented. Com. available laser dyes are classified according to their constellations, and some of their spectroscopic data are presented. Dyes with far better laser action properties could be synthesized. Some suggestions are made as to which chromophores appear most promising for conversion into potential laser dyes.

IT 53693-68-8  
 RL: PRP (Properties)  
 (lasing by, mol. structure and optical properties in relation to)  
 RN 53693-68-8 CAPLUS  
 CN [1,1':4',1'':4''-Quaterphenyl]-4,4'''-diamine, N,N,N',N'-tetraethyl- (9C1) (CA INDEX NAME)

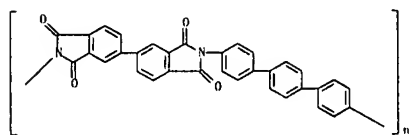




L5 ANSWER 193 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1969:471438 CAPLUS  
 DN 71:71438  
 TI Polyimide-forming reaction mixtures for use in laminates  
 IN Fincke, John K.; Wilson, Glenn Rhodes  
 PA Monsanto Co.  
 SO Ger. Offen., 18 pp.  
 CODEN: GWXXBX  
 UT Patent  
 LA German  
 FAN CNT 1

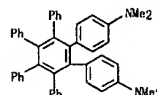
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 1808128		19690619	DE 1968-1808128	19681109 <--
FR 1591390			FR	
GB 1233034			GB	

PRAI US 19671109  
 AB Aqueous polyimide-forming mixts. were prepared from a mixture of an aromatic tetracarboxylic acid, an aromatic diamine, and a tertiary amine. Thus, a mixture of 7.9 g. pyridine, 29.5 ml. H<sub>2</sub>O, and 16.1 g. 3,3',4,4'-benzophenonetetracarboxylic dianhydride (I) was left standing at room temperature, and the suspension was treated with 5.4 g. m-CGH (NI2)2. The aqueous solution was applied to glass fabric and heated 2 hrs. at 100-50°. Individual strips of the glass fabric were placed upon one another and heated at 260-350° and 7-14 kg./cm.<sup>2</sup> pressure to give a hardened coated material. Other polyimides were similarly prepared from 3,3',4,4'-biphenyl-tetracarboxylic acid and p-terphenyl-4,4''-diamine and from 1 and 2,7-anthracenediamine.  
 IT 26402-03-9P  
 RL: PREP (Preparation)  
 (pyridine-containing aqueous solns. for preparation of, glass fabric laminates from)  
 RN 26402-03-9 CAPLUS  
 CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraxo[5,5'-bi-2H]-isoindolo)-2,2'-diyl] [1,1':4,1''-terphenyl]-4,4''-diyl (9C1) (CA INDEX NAME)



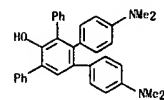
L5 ANSWER 194 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1969:421810 CAPLUS  
 DN 71:21810  
 TI Substituted pentaphenylcyclopentadienyl compounds and tetracyclones. VI. Mechanism of condensation of mono-p-substituted benzils and dibenzyl ketones to tetracyclones  
 AU Broser, Waldemar; Kusch, Joachim; Kurreck, Harry; Siegle, Peter  
 CS Freie Univ. Berlin, Berlin, Fed. Rep. Ger.  
 SO Chemische Berichte (1969), 102(5), 1715-24  
 CODEN: CHBEAM; ISSN: 0009-2940  
 DT Journal  
 LA German  
 AB p-RC6H4COCOC6H4R-p were condensed with p-RC6H4CH2COCH2C6H4R-p in alkaline medium to give tetra-(p-RC6H4-substituted)cyclopentadienone radicals (I). I were converted to the corresponding penta(p-RC6H4-substituted)cyclopentadienols (II), cyclopentadienyl bromides, or hexa(p-RC6H4-substituted)benzenes (where R are the same or different H, Me, Br, Ph, Cl, Me2N, or MeO). II formed Ziegler-type free radicals. Condensation of BzCOC6H4R-p with PhCH2COCH2C6H4R-p was a cis process to give 2,3-diphenyl-4,5-bis(p-RC6H4-substituted)cyclopentadienone radicals (III).

IT 23107-24-6P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 23107-24-6 CAPLUS  
 CN [1,1':2,1''-terphenyl]-4,4''-diamine, N,N,N',N'-tetramethyl-3',4',5',6'-tetraphenyl- (9C1) (CA INDEX NAME)



L5 ANSWER 195 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1969:10835 CAPLUS  
 DN 70:10835  
 TI Photochemistry of small rings. VIII. Synthesis, photolysis, and thermalolysis of p-disubstituted tetraphenylbicyclo[3.1.0]hexenones  
 AU Duerr, Heinz; Heitkamp, Peter  
 CS Univ. Saarlandes, Saarbruecken, Fed. Rep. Ger.  
 SO Justus Liebig's Annalen der Chemie (1968), 716, 212-15  
 CODEN: JLABCF; ISSN: 0075-4617  
 DT Journal  
 LA German  
 OS CASREACT 70:10835

AB 1,5-Diphenyl-2,3-bis(p-R-substituted-phenyl)bicyclo[3.1.0]hexen-6-ones (I) were photolyzed to give 2,6-Ph2-3,4-(p-RC6H4)2C6H10H (where R = NMe2, OMe, Br, or Cl). Substituents R did not affect the reaction path. The reaction therefore proceeds via an n → π\* triplet state, as had already been suggested for the reaction of I (R = H).  
 IT 21811-38-1P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 21811-38-1 CAPLUS  
 CN [m-Terphenyl]-2'-ol, 4',5'-bis[p-(dimethylamino)phenyl]- (8C1) (CA INDEX NAME)

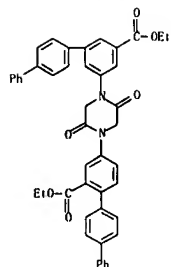


L5 ANSWER 196 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1968:114639 CAPLUS  
 DN 68:114639  
 TI Dicarboxylic acids having a dioxopiperazine ring  
 IN Iwakura, Yoshio; Izawa, Shinichi  
 PA Asahi Chemical Industry Co., Ltd.  
 SO Jpn. Tokkyo Koho, 3 pp.  
 CODEN: JAXXAD  
 DT Patent  
 LA Japanese  
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 42017831	B4	19670918	JP	19650319 <--

GI For diagram(s), see printed CA issue.  
 AB A mixture of 228 parts Me 4-(monochloroacetamido)benzoate, 150 parts phenyl glycidyl ether, and 5 parts triethylbenzylammonium chloride is heated at 140° for 2 hrs. to give 80% N,N'-bis(4-methoxycarbonylphenyl)dioxopiperazine (I), m. 252-3° (Me2CO). Similarly prepared are N,N'-bis(4-ethoxycarbonylphenyl)dioxopiperazine, N,N'-bis(3-methoxycarbonylphenyl)dioxopiperazine, N,N'-bis(3-ethoxycarbonylphenyl)dioxopiperazine, N,N'-bis(3,5-dimethyl-4-ethoxycarbonylphenyl)dioxopiperazine, N,N'-bis(3-butoxy-4-ethoxycarbonylphenyl)dioxopiperazine, N,N'-bis(3-phenoxy-4-ethoxycarbonylphenyl)dioxopiperazine, N,N'-bis(3-ethoxycarbonyl-5-butoxyphenyl)dioxopiperazine, N,N'-bis(3-ethoxycarbonyl-4-methoxyphenyl)dioxopiperazine, N,N'-bis(2-ethoxycarbonyl-4-methoxyphenyl)dioxopiperazine, N,N'-bis(4-carboxyphenyl)dioxopiperazine (m. >300°), N,N'-bis(3-carboxyphenyl)dioxopiperazine, N,N'-bis(3-chloro-4-ethoxycarbonylphenyl)dioxopiperazine, N,N'-bis(3,5-dichloro-4-ethoxycarbonylphenyl)dioxopiperazine, N,N'-bis(3-ethoxycarbonyl-5-chlorophenyl)dioxopiperazine, N,N'-bis(4-phenoxyphenyl)dioxopiperazine, N,N'-bis(3-phenoxyphenyl)dioxopiperazine, N,N'-bis(4-benzyloxycarbonylphenyl)dioxopiperazine, N,N'-bis(5-ethoxycarbonyl-3-biphenyl)dioxopiperazine, and N,N'-bis(4-ethoxycarbonyl-5-benzyloxycarbonyl)dioxopiperazine. The products are intermediates for the manufacture of polymers.  
 IT 17551-99-4P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 17551-99-4 CAPLUS  
 CN [p-Terphenyl]-3-carboxylic acid, 5,5'''-(2,5-dioxo-1,4-piperazinediyl)bis-, diethyl ester (8C1) (CA INDEX NAME)

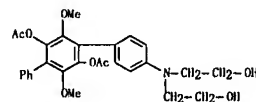
L5 ANSWER 196 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



\*1S ANSWER 197 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1965:36588 CAPLUS  
 DN 62:36588  
 ORF 62:6425F-h, 6426a  
 TI Potential antitumor agents. III. Polyporic acid  
 AU Cain, B. F.  
 CS Corvallis Hosp., Auckland, N. Z.  
 SO Journal of the Chemical Society (1964), (Dec.), 5472-4  
 CODEN: JCSO9A; ISSN: 0368-1769  
 UT Journal  
 LA English  
 DT 1965 15409- Discarded m22NC6HMAN2 condensed

CA AB CN  
ENH of. CA 58, 15409g. Dinazolized p-O2NC6H4NH2 condensed with 3,6-dichloro-2-phenyl-1,4-benzoquinone (I) in AcOH-buffered solution by the method described previously (loc. cit.) yielded the 5-(p-O2NC6H4) derivative (II) of I. II with NaOH gave the corresponding 3,6-dihydroxy analog. II in CHCl3 with Na in MeOH yielded the 3,6-dimethoxy analog (III) of II. III in MeOH boiled briefly with NaBH4, cooled, treated with AcOH in MeOH and then with addnl. ams. NaBH4, the mixture boiled briefly, and acidified with HCl yielded the quinol, which with AcOH containing HClO4 gave 3,6-dimethoxy-5-(p-nitrophenyl)-2-phenylguinol diacetate (IV). IV in 60% aqueous EtOH refluxed 15 min. with Na2S2O4, and the resulting carbox amine was treated in AcOH with H2O to give the diacetate with ethylene oxide and kept overnight with addnl. ethylene oxide gave 5-[p-(H2C2O2)2C6H4] 3,6-dimethoxy-2-phenyl-1,4-benzoquinone (V) of IV. V and Na2S2O4 in boiling EtOH treated with KOH and Na2S2O4 in H2O, shaken at room temperature, treated with concentrated HCl, and diluted with H2O, and the precipitate dissolved in AcOH and reprecip. with ferric alum in EtOH yielded 5-[p-(2-chloroethoxyethylamino)phenyl]-3,6-dimethoxy-2-phenyl-1,4-benzoquinone (VI), orange plates, m. 251-2° (aqueous EtOH and aqueous AcOH). VI, POCl3, and CHCl3 refluxed and evaporate in vacuo, and the residual brown gum refluxed with MeOH and concentrated HCl (saturated with CaCl2) yielded 5-[p-bis(2-chloroethoxyethylamino)phenyl]-3,6-dihydroxy-2-phenyl-1,4-benzoquinone (VII) as orange prismatic needles with a bronze lust. above 360°; permanganate-colored in aqueous NaHCO3. VII caused in mice bearing acute lymphocytic leukemia a statistically significant prolongation of life but only at dose levels which markedly depressed gain in body weight.

IT 261-49-OP. Ethanol, 2, 2'-[2,2',5'-dihydroxy-3',6'-dimethoxy-p-terphenyl-4-y]imino]di-, 2,5'-diacetate  
RI: PREP (Preparation)  
(preparation of)  
RN 1261-49-2-1-IPUS  
CN Ethanol, 2, 2'-[2,2',5'-dihydroxy-3',6'-dimethoxy-p-terphenyl-4-y]imino]di-, 2,5'-diacetate (7Cl, 8Cl) (CA INDEX NAME)



L5 ANSWER 198 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1957:17167 CAPLUS  
DN 51:17167  
ORF 51:3526a-1, 3527a-c  
T1 dye theory. Triarylmethane dyes of the biphenyl series. 11  
AU Theilacker, Walter; Berger, Wilhelm; Popper, Peter  
CS Tech, Hochschule Hannover, Germany  
SO Chemische Berichte (1956), 89, 970-83  
CODEN: CHBEAM; ISSN: 0009-2940

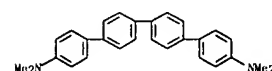
DT Journal  
LA Unavailable  
AS CASREACT 51:7177  
OS cf. C.A. 45:1767; preceding abstract The Ph homologous crystal violet  
carbinol (I) has been prepared and a new method for the preparation of the Ph  
homologous malachite green carbinol (II) is given. Fusing HNO<sub>3</sub> (8 cc.) is  
added slowly to 13.2 g. (p-PhC<sub>6</sub>H<sub>4</sub>)<sub>2</sub>CO in 80 cc. concentrated H<sub>2</sub>SO<sub>4</sub> at  
5-7°, the mixture kept overnight, decomposed with ice-H<sub>2</sub>O, the precipitate  
extracted with boiling Na<sub>2</sub>CO<sub>3</sub>, dried, extracted with hot BuOH, and the residue  
recrystd. from dioxane-H<sub>2</sub>O, giving 30% bis(2,4'-dinitrophenyl)ketone,  
slightly yellow needles, m. 223-4°. Treating 6 parts  
4-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>CGH<sub>6</sub>CGH<sub>2</sub>CO<sub>2</sub>H (III) with 5 parts PCl<sub>5</sub> 8 hrs. with frequent shaking,  
and heating the mixture 10 hrs. on a water bath, gives 4-bis(2,4'-nitrophenyl)-  
4'-oxy-2,2'-biphenyl (IV), needles, m. 182-3°. Heating 19 g. IV in  
100 cc. CGH<sub>6</sub> with 15 g. anhydrous AlCl<sub>3</sub> 4 hrs. on a water bath, distilling the  
CGH<sub>6</sub>, decomposing the residue with acid HCl, and recrystg. the precipitate give 68%  
4-nitro-4'-benzoyldiphenyl (V), slightly yellow needles, m. 156-7°.  
V is also prepared in 40% yield by heating 100 g. p-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>Ph, 125 g. V, and  
220 g. Bu<sub>2</sub>O 40 cc. PhNO<sub>2</sub> 6 hrs. at 100-110°, 100 g. PhNO<sub>2</sub> 6 hrs. at  
150° and 5 hrs. at 170°, pouring the solution into HCl (1:1),  
steam distilling the mixture, and extracting the precipitate with Me<sub>2</sub>CO. Reduction of

with  $\text{SnCl}_2$  in  $\text{HCl}$  at  $100^\circ$  gives  $73\%$  4-amino-4'-benzoylbiphenyl (VI), yellow leaflets, m.  $143-4^\circ$ . Heating 2.7 g. VI, 2.6 g. anhydrous  $\text{K}_2\text{CO}_3$ , and 47 g. MeI 6 hrs. at  $180^\circ$ , distilling the excess MeI, and crystallizing from  $\text{H}_2\text{SO}_4$  and  $\text{AcOH}$  gives 27% of 4'-bis(4-aminophenyl)biphenylammonium iodide (VII) which, thermally decomposed, gives 4-dimethylamino-4'-benzoylbiphenyl (VIII), yellow leaflets, m.  $182-3^\circ$ . Heating 2 g. VI, 4 g.  $\text{K}_2\text{CO}_3$ , and 46 g. MeI in an autoclave 3 hrs. at  $210^\circ$  gives 46% VII. Adding dropwise (3 hrs.) 50 g.  $\text{H}_2\text{SO}_4$  to 7 g. of VII and 75 g.  $\text{CH}_3\text{OH}$  and 75 g.  $\text{H}_2\text{O}$  and heating at  $160^\circ$  and pouring the cold mixture into  $\text{H}_2\text{O}$  gives 16% VIII; from the mother liquors 45% 4-methylamino-4'-benzoylbiphenyl, m.  $175^\circ$ , is isolated. Heating 10 g. IV, 8 g.  $\text{PhI}_2$ , and 5.2 g.  $\text{AlCl}_3$  in 90 cc.  $\text{PhNO}_2$  1 hr. each at 120, 130, and  $140^\circ$ , decomposing the cold mixture with  $\text{H}_2\text{O}$ , steam distilling it, extracting the precipitate with hot dilute  $\text{HCl}$  and dilute  $\text{Na}_2\text{CO}_3$ , and crystallizing the residue from  $\text{AcOH}$  give 69% 4-phenyl-4'-(p-nitrophenyl)-benzophenone (XI), leaflets, m.  $258-9^\circ$ . 2,4-dinitrophenylhydrazine, red needles, m.  $218-9^\circ$ . Adding in small portions 4 g. IX to 10 cc. conc. concentrated  $\text{H}_2\text{SO}_4$  and 30 cc.  $\text{AcOH}$  at  $-5^\circ$  gives 2% of 4'-bis(4-nitrophenyl)biphenyl, m.  $250-1^\circ$ . Adding 4 g. IX to 10 cc.  $\text{H}_2\text{SO}_4$  and  $\text{AcOH}$ , keeping the mixture several hrs. at  $0^\circ$ , decomposing it with ice, and washing the precipitate with  $\text{KOH-MeOH}$  and  $\text{MeOH}$  give 55% 4,4'-bis(p-nitrophenyl)benzophenone (X), light yellow needles, m.  $243^\circ$ . Reduction of 0.33 g. X in 100 cc.  $\text{PhMe}$  5 hrs. at  $70^\circ$  with 18 mg. used  $\text{PtO}_2$  gives 85% 4,4'-bis(p-nitrophenyl)-4'-aminophenylbenzophenone, m.  $308-10^\circ$ . Reduction of 1 g. X in 170 cc.  $\text{PhMe}$  with 55 mg.  $\text{PtO}_2$  3 hrs. at  $145^\circ$  gives 80% 4,4'-bis(p-aminophenyl)benzophenone (XI), yellow crystals, m.  $252^\circ$ , which is obtained in 58% yield by the following: 25 g. of 200 cc. concentrated HCl are added in small portions to 7.5 g. X in 450 cc. cyclohexanol at  $140-50^\circ$ , the precipitate extracted with hot  $\text{CSH}_5\text{NH}$ , and the extract diluted with  $\text{H}_2\text{O}$ . Diazoizing 0.73 g. XI in 50 cc. dioxane and 180 cc.  $\text{HCl}$  (1:1) at  $-5^\circ$  with the calculated amount of 0.5%  $\text{NaNO}_2$  solution, stirring the mixture several times, adding it, with stirring, to a solution of 10 g.  $\text{CuCl}$  in 100 cc. concentrated  $\text{HCl}$ , heating it on a water bath, diluting it with

1.5 ANSWER 198 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

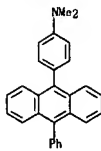
H<sub>2</sub>O, and chromatographically purifying the ppt. give 4,4'-bis(4'-chlorophenyl)benzophenone, needles, m. 280-1°. Adding dropwise 75 g. Me<sub>2</sub>SO to 5.6 g. XI in 450 cc. PhMe and 60 g. NaOH in 130 cc. H<sub>2</sub>O at 150-60°, steam dist. the mixt., and recryst. the ppt. from PhCl gives 4,4'-bis(4'-chlorophenyl)benzophenone, needles, m. 280-1° (XII), orange-yellow crystals, sinter 285°, m. 295-300°. Reduction of 10 g. 4-iodo-4'-nitrophenyl in 200 cc. cyclohexanol with 17.5 g. Fe shavings and 125 cc. concd. HCl gives 83% 4-iodo-4'-aminobiphenyl, m. 167°, which (7.5 g.) is heated in 75 cc. 1-ClOH<sub>7</sub>Me in a Cu flask with 50% NaOH, then 35 cc. Me<sub>2</sub>SO, 2.2 hrs., and the cooled soln. poured into H<sub>2</sub>O giving 74% 4-iodo-4'-aminobiphenyl, needles, m. 171°, 224°. Recryst. slowly in a N atm. 2.2 g. VIII in 20 cc. tetrahydrofuran (THF) to a Grignard reagent from 2.5 g. XIII in 100 cc. THF, refluxing the mixt. 24 hrs., distg. the THF, pouring the residue into NH<sub>4</sub>Cl, and keeping it 12 hrs. give 3.3 g. ppt., m. 140-60°, which is fractionally crystd. from PhMe, giving: (a) a solid, m. 151-52° on heating, which softens above 250° (probably a quaternary Ph deriv.); (b) a dark yellow fraction, m. 170-200°; (c) a yellow product, m. 70°. Fractions b and c (2.5 g.) are retentcd with the same amt. of Grignard reagent and the product isolated as before giving 11% phenylbis(4'-dimethylamino-4-biphenyl)carbinol (XIV) (Ph homologous d), yellow crystals, m. 214°. Its soln. in Me<sub>2</sub>SO turns gray on heating 10 min. in a N atm. 0.9 g. finely powd. anhyd. XIV to a Grignard reagent from 5 g. XIII in 50 cc. THF, refluxing the mixt. 12 hrs. with stirring, pouring the concd. soln. into NH<sub>4</sub>Cl soln., extg. the ppt. with C<sub>6</sub>H<sub>6</sub>, and adding cyclohexane to the ext. give 0.5 g. tris(4'-dimethylamino-4-biphenyl)carbinol (XV) (Ph homologous e) (XV), yellow crystals, m. 160-180° (decomp.). It dissolves in H<sub>2</sub>SO<sub>4</sub> and in HClO<sub>4</sub> with a deep red color, in AcOH (cold) a faintly reddish brown, (hot) a deep blue color, turning reddish brown again on cooling. The black-brown residue from the C<sub>6</sub>H<sub>6</sub> extn., on recrystn. from PhCl, gives a gray-green crystal. (Mutarone) p.p. 7. add 1.5 ml. methanolic sodium cyanide, m. 350°. Tris(4'-dimethylamino-4-biphenyl)carbinol (XVI), yellow crystals, m. 160-180° (decomp.). It dissolves in H<sub>2</sub>SO<sub>4</sub> and in HClO<sub>4</sub> with a deep red color, in AcOH (cold) a faintly reddish brown, (hot) a deep blue color, turning reddish brown again on cooling. 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IT	the type of II and I. 117878-74-7P. p-Quaterphenyl-4,4'''-diamine, N,N,N',N'-tetramethyl- RL: PREP (Preparation) (preparation of)
RN	117878-74-7 CAPIUS
CN	p-Quaterphenyl-4,4'''-diamine, N,N,N',N'-tetramethyl- (6C1) (CA INDEX NAME)



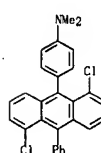
L5 ANSWER 199 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1953:31836 CAPLUS  
 DN 47:31836  
 OREF 47:5394c-h  
 TI *ms-Bis(aminophenyl)anthradiols. 1. ms-Bis(p-dialkylaminophenyl)anthradiols*  
 AU Etienne, Andre; Arcos, Joseph Charles  
 CS College of France, Paris  
 SO Bulletin de la Societe Chimique de France (1951) 727-32  
 CODEN: BSCFAS; ISSN: 0037-8968  
 DT Journal  
 LA Unavailable  
 AB cf. Willemart, C.A. 37, 5053.6. p-BrC<sub>6</sub>H<sub>4</sub>NMe<sub>2</sub> (5 g.) warmed with 0.5 g. Li in ether gives p-LiC<sub>6</sub>H<sub>4</sub>NMe<sub>2</sub>(I), which with 2.4 g. anthraquinone (II) gives 4 g. (78%) of 9,10-bis(p-dimethylaminophenyl)-9,10-dihydro-9,10-anthradial (III). From PhMe, crystallizing as a mixture, m. 232-4°, of 2 dimorphic forms, m. 229.5° and 240-1°. III dimerize, m. 173.5°. With dry HCl in Me<sub>2</sub>CO or dioxane III gives the di-HCl salt, m. 239°, and with SOCl<sub>2</sub> in PhMe impure 9,10-dichloro-9,10-dihydro-9,10-bis(p-dimethylaminophenyl)anthracene, m. 218°. The bis(diethylamino) homolog (IV) of III, made as above, m. 183-4.5°. PhN(Ci<sub>2</sub>H<sub>5</sub>)<sub>2</sub> and Br-CH<sub>2</sub>Cl give p-BrC<sub>6</sub>H<sub>4</sub>N(Ci<sub>2</sub>H<sub>5</sub>)<sub>2</sub>, m. 125°, which with Li and II gives the bis(dibenzylamino) analog (V) of III, m. 208-9°. I and 10-hydroxy-10-Ph anthrone (VI) give 95% of 9,10-dihydro-9-(p-dimethylaminophenyl)-10-phenyl-9,10-anthradial (VII), m. 196.5°. I and VI Me ether give 84% of VII 10-Me ether, m. 182°. II (3.8 g.), 9.5 g. PhNH<sub>2</sub>.HCl, and 19 g. PhNH<sub>2</sub> heated 3 h. at 175° give 20% of 10,10-bis(p-aminophenyl)anthrone (VIII), m. 304-5°, which with PhNH<sub>2</sub>.HCl and PhNH<sub>2</sub> at 185° gives 76% 9,10-bis(p-aminophenyl)anthracene (IX), m. 313.5°, obtained in 50% yield directly from II, in the same way. IX with CrO<sub>3</sub>-HOAc gives II, and with BzH the bis(p-benzylideneaminophenyl) analog of IX, m. 353-3.5°. N,N'-Di-Ac derivative of IX, m. 491-2°. III (0.25 g.) in HOAc with 2.05 cc. of 11% TiCl<sub>3</sub>-HCl gives 43% of 9,10-bis(p-dimethylaminophenyl)anthracene (X), m. 500-2°, also obtained in 38% yield from III with HBr-HOAc. IX, X, and MeI at 150° give 50% of X. Similarly, IV with TiCl<sub>3</sub> gives the bis(diethylamino) analog of X, m. 374.5-5.5°. V with HBr gives 85% of the bis(dibenzylamino) analog of X, m. 239-240°. VII with HBr gives 9-(p-dimethylaminophenyl)-10-phenylanthracene (XI), m. 302°. I and 10-phenylanthrone give a little 9-(p-dimethylaminophenyl)-9,10-dihydro-10-phenyl-9-anthrol (XII), m. 191.5°, and 70% XI. XII with HOAc gives XI.  
 IT 71901-29-6P. Aniline, N,N-dimethyl-p-10-phenyl-9-anthryl-RL: PREP (Preparation)  
 RN 71901-29-6 CAPLUS  
 CN Benzenamine, N,N-dimethyl-4-(10-phenyl-9-anthracenyl)- (9CI) (CA INDEX NAME)

L5 ANSWER 199 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



L5 ANSWER 200 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1926:21873 CAPLUS  
 DN 20:21873  
 OREF 20:2677h-i, 2678a-f  
 TI 1,5-Dichloro-9-phenylanthracene  
 AU Barnett, E. de B.; Matthews, M. A.  
 SO Berichte der Deutschen Chemischen Gesellschaft [Abteilung] B: Abhandlungen (1926). 59B, 670-9  
 CODEN: BUCHAD; ISSN: 0365-9488  
 DT Journal  
 LA Unavailable  
 AB cf. C. A. 19, 2489. Halogens in the α-position greatly influence the reactivity of the meso-positions, while a Ph group in l of the meso-positions has also a great influence but in general opposite to that of an α-Cl atom. It therefore was of interest to study a compound having both types of substituents and 1,5-dichloro-9-phenylanthracene (I) was chosen. 1,5-Dichloro-9-phenyl-10-anthrone (II), obtained almost quantitatively from the 9-Br compound in boiling C<sub>6</sub>H<sub>6</sub> with AlCl<sub>3</sub>, does not materially differ in its properties from 1,5-dichloroanthrone but shows a distinctly slight tendency to enolize; it is unattacked by a large excess of Cl in CCl<sub>4</sub> with or without a trace of I, while the corresponding anthranyl acetate (III) evolves heat and yields 1,5,9-trichloro-9-phenylanthrone (IV). Br reacts in the same way but in boiling AcOH attacks both II and III, the latter much more rapidly. III in AcOH with HNO<sub>3</sub> readily yields 1,5-dichloro-9-nitro-9-phenylanthrone (V) and under more energetic conditions the 9-HO compound (VI), whereas II is unchanged even on long boiling in AcOH; boiling with a large excess of concentrated HNO<sub>3</sub> gives 1,5-dichloro-9-hydroxy-9-nitrophenylanthrone (VII). 1,5-Dichloro-9-bromo-9-phenylanthrone (VIII) is much more stable than the non-phenylated compound and can be dried in a steam oven without decomposition, is unchanged by treatment in boiling C<sub>6</sub>H<sub>6</sub> suspension with dry NH<sub>3</sub>, is only slowly hydrolyzed by boiling aqueous Me<sub>2</sub>CO but is easily converted by NaOAc in boiling AcOH into the acetate (IX) of VI; it also shows some tendency to revert to II (e. g., when boiled in PhMe with or without Cu powder or when it is attempted to convert it into the 9,9-di-Ph compound by the Friedel-Crafts method). With Zn dust and HCl II is easily reduced to I. I readily adds Cl at the bridge union, forming a 9,10-dichloride (X); the extraordinary stability of X towards heat and alc. alkalis would indicate that it has the cis-configuration; moreover, aqueous Me<sub>2</sub>CO hydrolyzes it to a di-HO compound (XI) which probably has the cis-structure, as it liberates I from K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>. X also forms dialkoxo compds. On the other hand, several reactions of the X point to a trans-structure; thus, with PhNH<sub>2</sub> and PhNMe<sub>2</sub> it gives 1,5-dichloro-9-phenyl-10-anilino- (XII) and -10-dimethylaminanthracene (XIII), resp. and in the formation of the di-EtO compound there is also obtained (really as chief product) 1,5-dichloro-9-phenylanthranyl Et ether (XIV). In all these reactions, HCl is eliminated and the bridge union is restored. Heated alone at 180°. X very slowly loses HCl and yields 1,5,10-trichloro-9-phenylanthracene (XV), whereas in indifferent solvents (xylene, cycme) it gives only resinous products. The 2-fold properties of X may be due to a change in its configuration on heating or treatment with suitable reagents. If steric influences favor the trans- rather than the cis-configuration the dibromide should have a greater tendency than X to go over into the trans-form, and as a matter of fact no addition product of Br to I can be isolated; it apparently at once loses HBr and yields 1,5-dichloro-10-bromo-9-phenylanthracene (XVI). Similarly, HNO<sub>3</sub> in AcOH forms with I an addition product converted at once by the AcOH into 1,5-dichloro-9-phenyl-9-acetoxy-10-nitro-9,10-dihydroanthracene (XVII), which is remarkably stable, being unchanged by boiling C<sub>6</sub>H<sub>6</sub>. II, m. 245°. III, from II and Ac<sub>2</sub>O in C<sub>6</sub>H<sub>5</sub>SO<sub>3</sub> on the H<sub>2</sub>O bath, yellow, m. 167°. IV m. 195°. VIII, from 3 g. III with Br in CS<sub>2</sub> suspension (yield, 2.8 g.) or from II and Br in boiling AcOH, m. 171°. V m. 140° (decomposition). VII m. 270°. VI, also obtained from II in boiling C<sub>6</sub>H<sub>6</sub> slowly treated with CrO<sub>3</sub> in aqueous C<sub>6</sub>H<sub>5</sub>SO<sub>3</sub>, m. 224°. IX m. 234°. I (25 g. from 40 g. II), yellow, m.

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 104°; XVI, yellow, m. 174-5°. X (16 g. from 15 g. I), m. 175° (decomp.). XV, lemon-yellow, m. 96°. XII, yellow, m. 194°. XIII, yellow, m. 232°. XI m. 164° (decomp.); di-Me ether (2.4 g. from 3 g. X refluxed in MeOH), m. 210°; di-Et ether m. 201°. XIV, yellow, m. 124°. XVII (3.8 g. from 5 g. I), m. 171° (decomp.), converted by boiling alc. and 1 drop concd. H<sub>2</sub>SO<sub>4</sub> into the 9-EtO compd., m. 200°. IT 861298-58-OP. Aniline, p-(1,5-dichloro-10-phenyl-9-anthryl)-N,N-dimethyl-RL: PREP (Preparation)  
 RN 861298-58-0 CAPLUS  
 CN Aniline, p-(1,5-dichloro-10-phenyl-9-anthryl)-N,N-dimethyl- (2CI) (CA INDEX NAME)



L5 ANSWER 201 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1917:16193 CAPLUS

DN 11:16193

ORF 11:32357-1, 3236a-1, 3237a

T1 Derivatives of p-diethylaminobenzoyl-o-benzoic acids. 1

AU Perard, J.

SO Annali di Chimica Applicata (1917), 7, 340-414

CODEN: ACAPAR; ISSN: 0365-1037

Journal

LA Unavailable

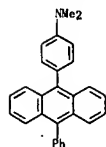
GI For diagram(s), see printed CA issue.

AB The interaction of PhMgBr and p-Me<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>COC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>Me, m. 118° (a), in Et<sub>2</sub>O followed by the addition of ice-H<sub>2</sub>O, gave rise to a compound (A), which reacted as α-p-dimethylaminophenyl-α-hydroxy-β,β'-diphenyl-α,α'-dihydro-β,β'-benzofuran, C<sub>26</sub>H<sub>24</sub>N<sub>2</sub>O (C<sub>6</sub>H<sub>4</sub>NMe<sub>2</sub>).<sub>2</sub>O, or o-[p-dimethylaminobenzoyl]phenyl-diphenylcarbinol, Me<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>COC<sub>6</sub>H<sub>4</sub>CPH<sub>2</sub>OH, microcrystals, m. 194°, which reacts with aqueous H<sub>2</sub>SO<sub>4</sub> to form the hydrogen sulfate, Me<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>COC<sub>6</sub>H<sub>4</sub>CPH<sub>2</sub>OH.SO<sub>3</sub>H, brilliant red needles, m. 140-50° (decomposition), which on treatment with alkali is readily converted into (A). The chloride derived from (A), red needles, m. 140-50° (decomposition). The chloroplatinate of (A), brilliant red microneedles, m. 190-200° (decomposition). Oxime of (A), leaflets, m. 179° (decomposition). The methyl ether of (A), m. 158°, is not decomposed by alc. KOH, but is reconverted into (A) on treatment with concentrated H<sub>2</sub>SO<sub>4</sub> in PhH; ethyl ether of (A), m. 175°. Reduction of (A) in EtOH with 4% Na-Hg yielded o-[p-dimethylaminohydroxybenzyl]phenyldiphenylcarbinol (B), Me<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>CH(OH)C<sub>6</sub>H<sub>4</sub>CPH<sub>2</sub>OH, m. 175°. The yield is quant. The oxidation of (B) in PhH by means of chloroanil reconverted it into (A). Other oxidizing agents such as CrO<sub>3</sub>, PbO<sub>2</sub>, etc., reacted with (A) to form a violet dye which was not purified nor identified. When (B) in AcOH was treated with a mixture of equal parts AcOH and H<sub>2</sub>SO<sub>4</sub>, and the resulting red soln was treated with NH<sub>3</sub>, two stereoisomeric α-p-dimethylaminophenyl-α,α'-diphenyl-α,α'-dihydro-β,β'-benzofurans, C<sub>26</sub>H<sub>24</sub>N<sub>2</sub>O (C<sub>6</sub>H<sub>4</sub>NMe<sub>2</sub>).<sub>2</sub>O, m. 130° and 110° (the latter being the more soluble in Et<sub>2</sub>O but less soluble in the EtOH), were formed. Both isomers, in PhH, when gradually treated with concentrated H<sub>2</sub>SO<sub>4</sub> were dehydrated with the formation of 9-p-dimethylaminophenyl-10-phenyl-9,10-dihydroanthracene, needles, m. 225°. The condensation of (B) with HNMe<sub>2</sub> in AcOH gave rise to o-[p-dimethylaminohydroxybenzyl]phenyl-p-dimethylaminophenyldiphenylmethane, Me<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>CH(OH)C<sub>6</sub>H<sub>4</sub>CPH<sub>2</sub>CH<sub>2</sub>NCMe<sub>2</sub>, prisms, m. 122°. A similar condensation with HNEt<sub>2</sub> yielded o-[p-dimethylaminohydroxybenzyl]phenyl-p-diethylaminophenyldiphenylmethane, microcrystals, m. 128°. (A) reacts with Et<sub>2</sub>NPh to form tetraalkyldiamino deriva. of the furan type. When condensed with Me<sub>2</sub>NPh, (A) in AcOH gave rise to α,α'-di-[p-dimethylaminophenyl]-α,α'-diphenyl-α,α'-dihydro-β,β'-benzofuran (D), obtained in 2 crystalline forms from PhH-alc., microprisms, m. 160°, slightly soluble in EtOH, and long needles, m. 166°, very soluble in EtOH. Neither form reacts with H<sub>2</sub>NOM, and no reduction follows treatment with Na-Hg. The reduction of (D) with Zn dust in AcOH gave rise to the malachite green leucobase derivative di-[dimethylaminophenyl]-o-benzohydroxyphenylmethane (E), (Me<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>)<sub>2</sub>CH(C<sub>6</sub>H<sub>4</sub>CHPh<sub>2</sub>), long needles, m. 225°. A reaction similar to the one which yielded (D) gave rise to α-dimethylaminophenyl-α-diethylaminophenyl-α,α'-diphenyl-

L5 ANSWER 201 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

α,α'-dihydro-β,β'-benzofuran, needles from alc., m. 90°. 150°, or crystals from PhH containing 1 mol. PhH, m. 90°. When (D) was warmed on the steam bath with concd. H<sub>2</sub>SO<sub>4</sub> until a drop of the soln. in H<sub>2</sub>O gave a bluish violet fluorescence, then dild. and neutralized with NH<sub>4</sub>OH, 9,9-di-[diethylaminophenyl]-10-hydroxy-10-phenyl-9,10-dihydroanthracene (F), prisms from PhH-alc., m. 228°, was formed. (F) when treated with Me<sub>2</sub>NPh in AcOH gave 9,9,10-tri-[p-dimethylaminophenyl]-10-phenyl-9,10-dihydroanthracene, microcrystals, m. 264°. 9,9-Di-[p-dimethylaminophenyl]-10-diethylaminophenyl-10-phenyldihydroanthracene, m. 250°. When heated in MeOH with HCl and subsequently treated with NH<sub>4</sub>OH, (F) yielded the corresponding 10-methyl ether, m. 175°. The 10-ethyl ether of (F), leaflets, m. 170°. When treated with Zn and AcOH (F) was reduced with the formation of di-[p-dimethylaminophenyl]-10-phenyl-9,10-dihydroanthracene, (Me<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>)<sub>2</sub>CH(C<sub>6</sub>H<sub>4</sub>CHPh<sub>2</sub>), m. 283°. By means of a reaction similar to the one which yielded (F), P. obtained 9-p-diethylaminophenyl-9-p-dimethylaminophenyl-10-hydroxy-10-phenyl-9,10-dihydroanthracene, m. 220°. Another isomeric form of (a), (b), m. 116°, was prep'd. by a method analogous to that used by Meyers in the prep'n. of BzC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>Me (cf. Monatsh. Chem. 35, 475(1904)). A mixt. of (a) and (b) m. 95°. When treated with PhMgBr, (b) gave a poor yield of (A) together with much resinous material. The interaction of Et<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>COC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>Me, m. 108°, and PhMgBr led to the formation of a compound (G) which is either α-p-diethylaminophenyl-α-hydroxy-α,α'-diphenyl-α,α'-dihydro-β,β'-benzofuran or the isomeric o-[p-diethylaminobenzoyl]phenyldiphenylcarbinol, prisms, m. 160°, which is analogous to (A). The following deriva. of (G) were obtained by methods similar to those used in the prep'n. of the corresponding deriva. of (A). Methyl ether, microprisms, m. 138-9°; ethyl ether, needles, m. 118°; oxime, prisms, m. 170°. o-[p-Diethylaminohydroxybenzyl]phenyldiphenylcarbinol, long needles from Et<sub>2</sub>O-ligroin, m. 140°. Di-[p-diethylaminophenyl]-α,α'-diphenyl-α,α'-dihydro-β,β'-benzofuran, needles from PhH-EtOH, m. 163°. Me<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>MC(C<sub>6</sub>H<sub>4</sub>NEt<sub>2</sub>).C<sub>6</sub>H<sub>4</sub>CPH<sub>2</sub>OH, m. 150°, derived from (G) is identical with the comp'd. obtained from (A), thus justifying P. in assigning the furan structure to (A) and (G). 9,9-Di-[p-diethylaminophenyl]-10-hydroxy-10-phenyl-9,10-dihydroanthracene, m. 225°. 9,9,10-Tri-[p-diethylaminophenyl]-10-phenyl-9,10-dihydroanthracene, microneedles, m. 258°, and 9,9-di-[p-diethylaminophenyl]-10-dimethylaminophenyl-10-phenyldihydroanthracene, m. 220°. IT 71901-29-6P, 9-Anthracene-p-aniline, N,N-dimethyl-10-phenyl-RL: PREP (Preparation) (preparation of) RN 71901-29-6 CAPLUS CN Benzenamine, N,N-dimethyl-4-(10-phenyl-9-anthracenyl)- (9CI) (CA INDEX NAME)

L5 ANSWER 201 OF 201 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

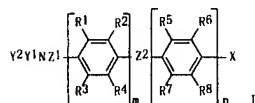


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L7	17	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	"HIRAOKA MIZUHO"/AU
L8	165	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	"SENOO AKIHIRO"/AU
L9	296	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	"TANABE HIROSHI"/AU
L10	207	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	"YAMADA NAOKI"/AU
L11	12	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	"NEGISHI CHIKA"/AU
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L13	1	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L12 AND (MONOAMINO OR MONO(W)AM INO)

=> d bib abs

L13 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2004:203794 CAPLUS  
 DN 140:237125  
 T1 Monoamino fluorescent dyes and organic luminescence devices using them  
 IN Saito, Akihiro; Hiraoka, Mizuho; Sano, Akihiro;  
 Tanabe, Hiroshi; Yamada, Naoki; Negishi, Chika  
 PA Canon Kabushiki Kaisha, Japan  
 SO PCT Int. Appl., 85 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN CNT 1  
 PATENT NO. KIND DATE APPLICATION NO. DATE  
 PI WO 2004020388 A1 20040311 WO 2003-JP10700 20030825  
 W: AF, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BZ, CA, CH, CN,  
 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
 GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS,  
 LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG,  
 PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,  
 TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
 FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 JP 2004085513 A 20040318 JP 2002-248745 20020828  
 AU 2003257686 A1 20040319 AU 2003-257686 20030825  
 US 2005244670 A1 20051103 US 2005-525622 20050225  
 PRA1 JP 2002-248745 A 20020828  
 WO 2003-JP10700 W 20030825  
 OS MARPAT 140:237125  
 GI



AB Disclosed are monoamino fluorescent dyes (I: R1-R8 = H, halogen, organic group; X = H, halogen, organic group; Y1, Y2 = organic group, Y1Y2 may form a ring; Z1, Z2 = divalent group; m + n = 4-10). Using I, organic (electro)luminescence devices are provided, which exhibits a luminescence hue with extremely high purity, and having an optical output of a high luminance with a high efficiency and a long life time. In an example, 4,4'-dibromo-2,2',3,3',5,5',6,6'-octafluoro-1,1'-biphenyl was condensed (I: I) with 9-(phenylamino)anthracene and the monobromo product was treated with 1-naphthylboronic acid to provide a fluorescent amine dye.  
 RE. CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

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(FILE 'HOME' ENTERED AT 12:45:37 ON 23 JUN 2007)

FILE 'REGISTRY' ENTERED AT 12:45:46 ON 23 JUN 2007

L1 STRUCTURE UPLOADED

D

L2 8 SEA SSS SAM L1

L3 508 SEA SSS FUL L1

FILE 'CAPLUS' ENTERED AT 12:47:00 ON 23 JUN 2007

L4 339 SEA ABB=ON PLU=ON L3

D

L5 201 SEA ABB=ON PLU=ON L4 AND PY<2004

D QUE L5 STAT

D 1-201 BIB ABS HITSTR

E SAITOH AKIHITO/AU

L6 35 SEA ABB=ON PLU=ON "SAITOH AKIHITO"/AU

E HIRAOKA MIZUHO/AU

L7 17 SEA ABB=ON PLU=ON "HIRAOKA MIZUHO"/AU

E SENOO AKIHIRO/AU

L8 165 SEA ABB=ON PLU=ON "SENOO AKIHIRO"/AU

E TANABE HIROSHI/AU

L9 296 SEA ABB=ON PLU=ON "TANABE HIROSHI"/AU

E YAMADA NAOKI/AU

L10 207 SEA ABB=ON PLU=ON "YAMADA NAOKI"/AU

E NEGISHI CHIKA/AU

L11 12 SEA ABB=ON PLU=ON "NEGISHI CHIKA"/AU

E L6 OR L7 OR L8 OR L9 OR L10 OR L11

L12 653 SEA ABB=ON PLU=ON L6 OR L7 OR L8 OR L9 OR L10 OR L11

L13 1 SEA ABB=ON PLU=ON L12 AND (MONOAMINO OR MONO(W)AMINO)

D QUE L13 STAT

D BIB ABS

FILE HOME

FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 22 JUN 2007 HIGHEST RN 938512-67-5

DICTIONARY FILE UPDATES: 22 JUN 2007 HIGHEST RN 938512-67-5

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FILE CAPLUS

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FILE COVERS 1907 - 23 Jun 2007 VOL 147 ISS 1  
FILE LAST UPDATED: 22 Jun 2007 (20070622/ED)

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E3	12 -->	SAITO AKIHITO/AU
E4	1	SAITO AKIHSA/AU
E5	3	SAITO AKIKAZU/AU
E6	235	SAITO AKIKO/AU
E7	3	SAITO AKIKO TAKAHASHI/AU
E8	1	SAITO AKIKOSHOSHI TAKASHI/AU
E9	2	SAITO AKIMASA/AU
E10	5	SAITO AKIMITSU/AU
E11	5	SAITO AKINOBU/AU
E12	67	SAITO AKINORI/AU

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L14 12 "SAITO AKIHITO"/AU

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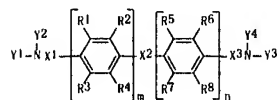
L14 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN  
 2006:1115795 Document No. 145:476508 Bonding agent for casting dies, casting dies, and manufacturing process for the casting die. Okuyama, Shin; Honma, Tsukasa; Saito, Akihito (Hodogaya Ashland Co., Ltd., Japan; Hyoya K. K.). Jpn. Kokai Tokkyo Koho JP 2006289467 A 20061026, 11pp. (Japanese). CODEN: JXXXXF. APPLICATION: JP 2005-115885 20050413.  
 AB The disclosed bonding agent for casting dies comprises a cresol-modified phenolic resin, a B compound, and an isocyanate compound. The composition for casting dies contain the bonding agent, aggregates, and ternary amine type catalyst. The manufacturing process involves mixing of a cresol-modified phenolic resin solution containing B compd with granular aggregates, molding the mixture, and curing by passing the gaseous ternary amine catalyst. The bonding agent prevent cracking and other structural damages in the long dies prepared by room temperature curing method.

L14 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN  
 2006:914047 Joint materials for the organ baths [machine translation]. Saito, Akihito (Yamaha Livingtech Corp., Japan). Jpn. Kokai Tokkyo Koho JP 2006230745 A 20060907, 7pp. (Japanese). CODEN: JXXXXF. APPLICATION: JP 2005-50620 20050225.  
 AB [Machine Translation of Descriptors]. Provide the joint materials for the organ baths which can seal certainly the crevice between adjacent counters and wall-surface parts in the organ bath, the wall-surface part, or the organ bath. The joint materials 20 which consist of the elastic were attached to the crevice between the organ bath 14 and wall-surface part 11 grade and between the counter 16 and the right-wall surface panel 15b. These joint materials 20 consisted of the surface seal part 21 installed along with a part for the surface side part of the organ bath 14, and the plug pressure bonding part 22 which is prolonged toward the inside side of the crevice from the back surface of the surface seal part 21, and is installed along with the side piece of the organ bath 14. And a part for the central side part of the up-and-down direction of the plug pressure bonding part 22 incurvated the plug pressure bonding part 22 so that the side piece of the organ bath 14 might energize. Moreover, the elastic fillet parts 23 and 24 were formed into the part into which the plug pressure bonding part 22 projected. Furthermore, the surface seal part 21 consisted of the organ bath close part 21a close to the organ bath 14, and the wall-surface close part 21b close to wall-surface part 11 grade.

L14 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN  
 2005:566684 Joint structure of bathtub [Machine Translation]. Saito, Akihito (Yamaha Livingtech Corp., Japan). Jpn. Kokai Tokkyo Koho JP 2005168618 A 20050630, 6 pp. (Japanese). CODEN: JXXXXF. APPLICATION: JP 2003-409872 20031209.  
 AB [Machine Translation of Descriptors]. It is not influenced by size of interval of the bathtub and the wall surface section, stabilizes and offer the joint structure of the bathtub which can install the bond. Wall surface section 11 and the like and joint structure 20 of the bathtub which is provided in the opening of the top edge of bathtub 14, fixed section the plural bond hubs 22 which have 26 and support section 27 and insertion section was formed with with the bond 21 which has 24 and blockade section 25. And, in wall surface section 11 and the like locking fixed section 26, support section 27 and with wall surface section 11 and the like, wall surface section 11 and the like and it blocked with the top edge of bathtub 14 in blockade section 25 by inserting insertion section 24. In addition, 3 concave sections 24a were provided in insertion section 24, optional concave section 24a and engagement possible convex section 27a were provided in support section 27.

L14 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN  
 2004:203906 Document No. 140:261172 Organic light-emitting devices. Saito, Akihito; Hiraoka, Mizuho; Suzuki, Koichi; Senoo, Akihiro; Tanabe, Hiroshi; Yamada, Naoki; Negishi, Chika (Canon Kabushiki Kaisha, Japan). PCT Int. Appl. WO 2004020548 A1 20040311, 84 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CV, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2003-JP10782 20030826. PRIORITY: JP 2002-248354 20020828.

G1



AB Organic light-emitting devices comprising at least a pair of electrodes consisting of an anode and a cathode and 21 organic compound-containing layers sandwiched between the electrodes are described in which 21 organic compound-containing layer contains 21 compound selected from the group consisting of the compds. represented by the general formula 1 (Y1 and Y2, and Y3 and Y4 may bond to form rings; X1, X2 and X3 = independently selected direct bonds or divalent groups selected from alkylene, aralkylene, arylene, divalent heterocyclic, alkenylene, imino, -SiH2-, silylene, carbonyl, ether, and thioether groups having no substituents or a substituent which can include a linking group consisting of (un)substituted arylene or divalent heterocyclic groups; Y1-4 = independently selected alkyl, aralkyl, aryl, heterocyclic, amino, silyl, alkylene, aralkylene, alkenylene, imino, -SiH2-, silylene, carbonyl, ether, and thioether groups having no substituents or a substituent which can include a linking group consisting of (un)substituted arylene or divalent heterocyclic groups; R1-4 = independently selected H, halogen, (un)substituted alkyl, (un)substituted aralkyl and (un)substituted aryl groups; and m + n = 0-10) in a host.

L14 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN  
 2004:203794 Document No. 140:237125 Monoamino fluorescent dyes and organic  
 luminescence devices using them. Saito, Akihito; Hiraoka, Mizuho; Senoo, Akihiro; Tanabe, Hiroshi; Yamada, Naoki; Negishi, Chika  
 (Canon Kabushiki Kaisha, Japan). PCT Int. Appl. WO 2004/020388 A1  
 20040311, 85 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA,  
 BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE,  
 ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ,  
 LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ,  
 OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,  
 TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW; RW: AT, BE, BF, BJ, CF,  
 CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML,  
 MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2.  
 APPLICATION: WO 2003-JP10700 20030825. PRIORITY: JP 2002-248745 20020828.

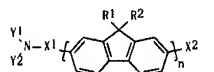
G1



AB Disclosed are monoamino fluorescent dyes (1: R1-R8 = H, halogen, organic group; X = H, halogen, organic group; Y1, Y2 = organic group, Y1 and Y2 together may form a ring; Z2 = divalent group; m + n = 4-10). Using 1, organic (electro)luminescence devices are provided, which exhibits a luminescence hue with extremely high purity, and having an optical output of a high luminance with a high efficiency and a long life time. In an example, 4,4'-dibromo-2,2',3,3',5,5',6,6'-octafluoro-1,1'-biphenyl was condensed (1:1) with 9-(phenylamino)anthracene and the monobromo product was treated with 1-naphthylboronic acid to provide a fluorescent amine dye.

L14 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN  
 2004:203793 Document No. 140:254984 Monoamino fluorene dyes and organic  
 light-emitting device using them. Saito, Akihito; Hiraoka, Mizuho; Suzuki, Koichi; Senoo, Akihiro; Tanabe, Hiroshi; Yamada, Naoki;  
 Negishi, Chika (Canon Kabushiki Kaisha, Japan). PCT Int. Appl. WO  
 2004/020387 A1 20040311, 101 pp. DESIGNATED STATES: W: AE, AG, AL, AM,  
 AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK,  
 DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE,  
 KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,  
 MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,  
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW; RW: AT,  
 BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE,  
 IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN:  
 PIXXD2. APPLICATION: WO 2003-JP10260 20030812. PRIORITY: JP 2002-252846  
 20020830.

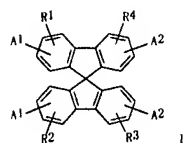
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AB Novel monoamino fluorene dyes (1: R1, R2 = H, organic group; X = H, halogen, organic group; CN; Y1, Y2 = organic group, Y1 and Y2 together may form a ring; Z = organic divalent group, direct bond; n = 1-10) are provided. Organic light-emitting/electroluminescent devices using 1 exhibit good luminescence hue of extremely high purity and have optical output with high luminescence efficiency, high luminance and longer operating life. In an example, 2,2'-bis(9,9-dimethylfluorene) was prepared, monoindicated on the 7-position, and condensed with bis(p-tolyl)amine to provide a fluorescent dye.

L14 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN  
 2004:203785 Document No. 140:254983 Spirobifluorene dyes and organic  
 electroluminescent devices using them. Suzuki, Koichi; Hiraoka, Mizuho;  
 Senoo, Akihiro; Yamada, Naoki; Negishi, Chika; Saito, Akihito  
 (Canon Kabushiki Kaisha, Japan). PCT Int. Appl. WO 2004/020373 A1  
 20040311, 91 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA,  
 BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE,  
 ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ,  
 LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ,  
 OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,  
 TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW; RW: AT, BE, BF, BJ, CF,  
 CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML,  
 MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2.  
 APPLICATION: WO 2003-JP10258 20030812. PRIORITY: JP 2002-246601 20020827.

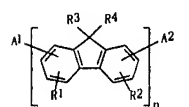
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AB Provided are novel spirobifluorenes (1: A1, A2 = optionally substituted polycyclic aromatic or heterocyclic group; R1-R4 = H, organic group, substituted amino, CN, halogen). Organic electroluminescence devices using the spiro compound have an optical output with an extremely high efficiency and a high luminance, and an extremely high durability. In an example, 2,2',7,7'-tetrabromo-9,9'-spirobifluorene was treated with 9,9-dimethylfluorene-2-boronic acid in the presence of Pd(PPh3)4 to give a spirobifluorene compound containing 4 dimethylfluorene groups.

L14 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN  
 2004:203784 Document No. 140:254982 Fluorene dyes and organic  
 electroluminescent devices using them. Suzuki, Koichi; Hiraoka, Mizuho;  
 Senoo, Akihiro; Yamada, Naoki; Negishi, Chika; Saito, Akihito;  
 Tanaka, Daisaku; Yashiro, Ryoji (Canon Kabushiki Kaisha, Japan). PCT Int.  
 Appl. WO 2004/020372 A1 20040311, 87 pp. DESIGNATED STATES: W: AE, AG,  
 AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ,  
 DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN,  
 IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,  
 MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,  
 SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW;  
 RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB,  
 GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English).  
 CODEN: PIXXD2. APPLICATION: WO 2003-JP10259 20030812. PRIORITY: JP  
 2002-246447 20020827.

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AB Fluorene dyes (1: A1, A2 = optionally substituted polycyclic aromatic group; R1, R2 = H, organic group, substituted amino, CN, halogen; n = 1-10) are disclosed which are used to provide organic electroluminescent devices. Such devices have an optical output exhibiting a high luminance with an extremely high efficiency, and have extremely high durability. In an example, 2,7-dibromo-9,9-dimethylfluorene was condensed (1:2) with 1-pyreneboronic acid to give a fluorescent dye.

L14 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN  
 2004:203783 Document No. 140:261171 Condensed polycyclic compounds and organic light-emitting device using the same. Suzuki, Koichi; Kawai, Tetsundo; Senoo, Akihito; Yamada, Naoki; Saito, Akihito; Okaizawa, Maki (Canon Kabushiki Kaisha, Japan). PCT Int. Appl. WO 2004/020371 A1 20040311, 77 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SV, TJ, TW, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW; RW: AT, BE, BF, BJ, CF, CC, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2003-JP10783 20030826. PRIORITY: JP 2002-246600 20020827; JP 2003-291191 20030811.

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\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The invention is directed to the preparation of condensed polycyclic compds. I as (component) of organic light-emitting devices that are extremely efficient in a light output with high luminance and is extremely durable [R1 = H, halo, cyano, substituted amino or (un)substituted alkyl, aralkyl, aryl; Ar1 to Ar5 = independently (un)substituted condensed polycyclic aromatic group or condensed polycyclic heterocyclic group]. For example, Suzuki cross-coupling of hexabromobenzene with 9,9-dimethylfluorene-2-boronic acid gave 42% II and 17% all substituted 9,9-dimethylfluorenyl II. A device fabricated using II in the active layer exhibited blue emission with a luminance of 2800 cd/m<sup>2</sup> at a c.d. of 10 mA/cm<sup>2</sup>.

L14 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN  
 1999:70423 Document No. 130:183247 Curable silicone resins with good storage stability, their heat-resistant cured products, and their manufacture. Ito, Masaki; Sudo, Michitaka; Zank, Gregg Alan; Saito, Akihito; Maruyama, Teruhito (Dow Corning Asia Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 11021353 A 19990126 Heisei, 8 pp. (Japanese). CODEN: JKKXAF. APPLICATION: JP 1997-174157 19970630.

AB The curable silicone resins with nominal structure [R2Si(OH)0.5]a[R2SiO]b[RSi(OH)0]c[RSiO1.5]d [each R = hydrocarbyl; a + b + c + d = 1 (a ≥ 0; b, c, d > 0); 0.001 ≤ (a + b)/(c + d) ≤ 1.0; 0.12 ≤ c/(c + d) ≤ 0.35] are manufactured by hydrolytic condensation of RSiX3 (A: R = hydrocarbyl; X = halogen) and Y(SiR2O)eSiR2Y (B: R = hydrocarbyl; Y = halogen, OH; H: e = 0-300) in a 2-phase reaction system comprising (1) O-containing organic solvents or their mixts. with 550 volume% hydrocarbon solvents and (2) H2O which may contain Si, B equiv (per mol halogen in A and B) water-soluble inorg. bases or weak acid salts having buffering ability. The cured products are manufactured from the resins by heating at 50-350° or at 20-350° in the presence of catalysts or crosslinking agents. Thus, 0.345 mol MeSiCl3 reacted with 0.0608 mol Me2SiCl2 in H2O and iso-BuOMe at 560° to give a resin showing Mw 4830 and Mn 1230, with no change in mol. weight or solubility for 6 mo at room temperature exposed to air. Then, a CHCl3 solution containing 1 g of the resin and 5 mg Sn diacetate was cast on glass, left at room temperature for 2 h, and the resulting film heated at 100-200° to give a test piece showing shear modulus 490, 210, and 125 MPa at 25, 100, and 200°, resp.

L14 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN  
 1998:392388 Document No. 129:95859 Silylated polymethylsilsequioxanes having good storability, softness, heat resistance and compatibility with polyorganosilsequioxanes and manufacture thereof. Ito, Masaki; Sudo, Michitaka; Saito, Akihito (Dow Corning K. K., Japan; Dow Corning Asia Ltd.). Jpn. Kokai Tokkyo Koho JP 10158403 A 19980616 Heisei, 10 pp. (Japanese). CODEN: JKKXAF. APPLICATION: JP 1996-317776 19961128.  
 AB The title polymers having polystyrene-equivalent Mn 380-2000 are [MeSiO3/2]n[MeSi(OH)02/2]m-k[MeSi(OSiR1R2R3)02/2]k obtained by silylating the silanol group of the polymethylsilsequioxanes [MeSiO3/2]n[MeSi(OH)02/2]m with, e.g., trimethylchlorosilane, wherein m and n are nos. to provide the above mol. weight, with the m/(m + n) values fall in an area by lines connecting the points m/(m + n) = 0.152/(Mn x 10-3) + 0.10; 1/(Mn x 10-3) = 1000/2000; 1/(Mn x 10-3) = 1000/380; and m/(m + n) = 0.034/(Mn x 10-3); k < m; (m - k)/(m + n) ≤ 0.12 (residual silanol group content); R1-3 = (un)substituted inert hydrocarbon group.

L14 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN  
 1998:146961 Document No. 128:205489 Curable polymethylsilsequioxane compositions. Ito, Masaki; Michino, Tetsuyuki; Saito, Akihito (Dow Corning K. K., Japan; Dow Corning Asia Ltd.). Jpn. Kokai Tokkyo Koho JP 10060279 A 19980303 Heisei, 10 pp. (Japanese). CODEN: JKKXAF. APPLICATION: JP 1996-217436 19960819.  
 AB Title compns. comprise a polymethylsilsequioxane with number-average mol. weight 380-2000 (using polystyrene as standard) and formula (CH3SiO3/2)n(CH3Si(OH)02/2)m and colloidal silica 5-250 parts (based on 100 parts of the siloxane). The silsequioxanes are prepared by hydrolytic polymerization of methyltrialhalosilanes. The compns. are useful in providing water-repellent coatings.

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L14 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2007 ACS ON STN  
 AN 2004:203906 CAPLUS  
 DN 140:261172  
 TI Organic light-emitting devices  
 IN Saito, Akihito; Hiraoaka, Mizuhito; Suzuki, Koichi; Senoo, Akihiro;  
 Tanabe, Hiroshi; Yamada, Naoki; Negishi, Chika  
 PA Canon Kabushiki Kaisha, Japan  
 SO PCT Int. Appl., 84 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAX.CNT 1

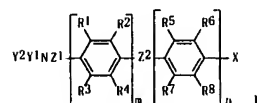
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004020548	A1	20040311	WO 2003-JP10782	20030826
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2004087363	A	20040318	JP 2002-248354	20020828
AU 2003256084	A1	20040319	AU 2003-256084	20030826
US 2006068221	A1	20060330	US 2005-525198	20050222
PRA1 JP 2002-248354	A	20020828		
WO 2003-JP10782	W	20030826		
OS WARPAT 140:261172				
G1				



AB Organic light-emitting devices comprising at least a pair of electrodes consisting of an anode and a cathode and  $\geq 1$  organic compound-containing layers sandwiched between the electrodes are described in which  $\geq 1$  organic compound-containing layer contains  $\geq 1$  compound selected from the group consisting of the compds. represented by the general formula I (Y1 and Y2, and Y3 and Y4 may bond to form rings; X1 and Y1 and/or Y2, and X3 and Y3 and/or Y4 may bond to form rings; X1, X2 and X3 = independently selected direct bonds or divalent groups selected from alkylene, aralkylene, arylene, divalent heterocyclic, alkenylene, imino, -SiH2-, silylene, carbonyl, ether, and thioether groups having no substituents or a substituent which can include a linking group consisting of (un)substituted arylene or divalent heterocyclic groups; Y1-4 = independently selected alkyl, aralkyl, aryl, heterocyclic, amino, silyl, alkenylene, aralkylene, alkenylene, imino, -SiH2-, silylene, carbonyl, ether, and thioether groups having no substituents or a substituent which can include a linking group consisting of (un)substituted arylene or

L14 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2007 ACS ON STN  
 AN 2004:203794 CAPLUS  
 DN 140:237125  
 TI Monoamine fluorescent dyes and organic luminescence devices using them  
 IN Saito, Akihito; Hiraoaka, Mizuhito; Senoo, Akihiro; Tanabe, Hiroshi; Yamada, Naoki; Negishi, Chika  
 PA Canon Kabushiki Kaisha, Japan  
 SO PCT Int. Appl., 85 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAX.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004020388	A1	20040311	WO 2003-JP10700	20030825
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GM, GR, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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JP 2004083513	A	20040318	JP 2002-248745	20020828
AU 2003257686	A1	20040319	AU 2003-257686	20030825
US 2005244670	A1	20051103	US 2005-525622	20050225
PRA1 JP 2002-248745	A	20020828		
WO 2003-JP10700	W	20030825		
OS WARPAT 140:237125				
G1				



AB Disclosed are monoamine fluorescent dyes (I: R1-R8 = H, halogen, organic group; X = H, halogen, organic group; Y1, Y2 = organic group; Y1Y2 may form a ring; Z1, Z2 = divalent group; m + n = 4-10). Using I, organic (electro)luminescence devices are provided, which exhibits a luminescence hue with extremely high purity, and having an optical output of a high luminance with a high efficiency and a long life time. In an example, 4,4'-dibromo-2,2',3,3',5,5',6,6'-octafluoro-1,1'-biphenyl was condensed (I:1) with 9-(phenylamino)anthracene and the monobromo product was treated with 1-naphthylboronic acid to provide a fluorescent amine dye.  
 RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2007 ACS ON STN (Continued)  
 divalent heterocyclic groups; R1-4 = independently selected H, halogen, (un)substituted alkyl, (un)substituted aralkyl and (un)substituted aryl groups; and m + n = 0-10) in a host.  
 RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

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COST IN U. S. DOLLARS

SINCE FILE  
ENTRY

TOTAL  
SESSION

FULL ESTIMATED COST

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1311.49

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE  
ENTRY

TOTAL  
SESSION

CA SUBSCRIBER PRICE

-168.48

-168.48

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